

Manutius

176.0

47534

REGD
26 DEC 06

ANNUAL REPORT
ON THE
Medical and Health Department
FOR
1905.

CONTENTS.

REPORT OF THE ACTING DIRECTOR.

SECTIONS.

- I. Statistics of Population.
- II. Prevalence of Sickness.
- III. Meteorological conditions.
- IV. Recurrence of particular diseases.
- V. Small-pox.
- VI. Vaccination.
- VII. Sanitary Administration.
- VIII. Hospitals, Asylums and Dispensaries.
- IX. Miscellaneous.

ANNEXURES.

- I. (a) Statistics of Population.
(b) Meteorological Return.
- II. Hospital Return of Diseases and Deaths, &c.
- III. Sanitary work performed in Port Louis.
- IV. Sanitary work performed in the rural districts.
- V. Report of Dr. Rouget on the Civil Hospital.
- VI. Report of Dr. Paddle on the Lunatic Asylum.
- VII. Report of Dr. Paddle on the work performed by him as Government Analyst.

CHARTS.

- I. Monthly admissions for Malaria as well as the monthly rainfall during 1905.
- II. Monthly number of admissions for Dysentery in 1905.
- III. Admissions for, and deaths from, Tuberculosis during each month of 1905.
- IV. Monthly number of admissions for Bronchitis during 1905.

ANNUAL REPORT
ON THE
Medical and Health Department
FOR
1905.

The Honorable
The Acting Colonial Secretary,

I have the honour to submit herewith the Annual Report on the Medical and Health Department for the year 1905 with the usual annexures.

2. I beg to express my regret that unforeseen and unavoidable circumstances, chief amongst which the recent epidemic of influenza which for a time considerably reduced the efficiency of the staff, prevented the report from being sent up at an earlier date.

L. G. BARBEAU,

28th August, 1906.

Acting Director.

I.—STATISTICS OF POPULATION.

The estimated population of the Colony on December 31st. numbered 377,532 which shows a decrease of 1,213 on the estimated population of 1904.

2. There has been an excess of emigrants over immigrants in the case of Europeans, Whites, Mixed and Coloured amounting to 234, but this is more than balanced by an excess of 357 in favour of Indian and Chinese immigration. The increase of population due to that factor has therefore been 123.

3. On the other hand, the number of deaths registered during 1905, viz : 15,379, exceeded the number of births by 1,336 so that this fact is sufficient to account for the decrease above noticed in the total population of the island.

4. The death-rate which stood at 32.2 per thousand in 1904 rose to 40.6 in 1905 while at the same time a reduction took place in the birth-rate which fell from 37.6 per mille in 1904 to 37 in 1905.

5. The death-rate ranged from 29.4 per thousand in the District of Moka to 59.9 in that of Port Louis, and the birth-rate from 33.1 in Port Louis to 46.1 in Rivière du Rempart.

6. The mortality of children under five years of age has been higher, the deaths for that age period numbering 5,006 or 32.6 o/o of the total deaths at all ages against 3,723 or 30.9 o/o in 1904.

7. Deaths among infants under one year were 2,519 or 179.4 per thousand of the births for the year and the registered still-births amounted to 8.2 o/o of the total births.

8. The statistical information above supplied has been obtained from figures kindly placed at my disposal by the Registrar General. In the Annual Report for 1904, Dr. Lorans has pointed out the unreliability of the Civil Status records as sources of information in regard to the causes of death owing to the present deficient system of registration in that respect in the

greater part of the island, many deaths being entered under the heading fever, for example, which are probably unconnected with malaria. Taking them as they stand, however, the Registrar General's records give the following among the morbid factors principally responsible for the mortality figures for 1905:—Malarial fever, dysentery, tuberculosis, pneumonia, bronchitis, diarrhoea, cardiac diseases, influenza, cachexia, renal diseases, &c. These diseases are here arranged in the order of their respective importance as causes of death.

II.—PREVALENCE OF SICKNESS.

For the reasons above given, it has been found preferable to adhere to the plan adopted in previous years, in discussing the prevalence of sickness during the year under review, to take as a basis for calculation the returns from the hospitals and dispensaries from which more accurate data can be obtained for that purpose.

2. The large number of admissions into the hospitals, the high case mortality and large attendance at the various dispensaries on the one hand, coupled with the higher general death-rate and lower birth-rate on the other, all tend to indicate that the sanitary condition of the Colony has not been as satisfactory during 1905 as it had been the year before. In point of fact, 1905 may be compared in that respect with 1903 with which it has many points of resemblance.

3. The admissions into the different Hospitals and Asylums of the Colony reached 20,735 showing an increase of 3,243 over those for 1904. The corresponding figure for 1903 was 20,867.

4. The case mortality in these Institutions has been 5.52 o/o against 5.42 o/o in 1904, 5.98 o/o in 1903 and 5.57 o/o in 1902 respectively.

5. *Malarial Fever* accounts for 5,123 admissions, or about one-fourth of the total number of admissions registered for the year. The cases which came under notice were classified into the following types:—

<i>Intermittent</i> ...	Quotidian ...	...	...	2,873
	Tertian ...	...	...	211
	Quartan ...	...	...	51
	Irregular ...	...	...	121
	Type undiagnosed	...	...	1,584
<i>Remittent</i>	...	...	...	212
<i>Pernicious</i>	...	...	...	71
	Total	...	...	5,123

The admissions were 3,039, 4,788 and 3,360 for 1904, 1903 and 1902 respectively.

6. The higher incidence of malaria in 1905 corresponds to the higher rainfall registered during the year, especially in January and March, during which latter month the morbidity from that cause reached its climax with 1,166 admissions into the different hospitals.

7. *Hypertrophy of the Spleen* :—An increase in the number of admissions for that complaint was to be expected in presence of the high incidence of malaria referred to above. In the absence of other discoverable causes, these cases are provisionally at any rate regarded as closely related to malaria. 657 patients suffering from splenic enlargement applied for relief at the hospitals against 492 and 373 in the two preceding years.

8. *Dysentery* :—The number of admissions for that disease was 1013 with 169 deaths, an increase of 508 cases over the number recorded in 1904. The case mortality, viz : 16.5 %, has however been lower than in 1904 when it stood at 17.2 %. The increased incidence of dysentery might likewise have been apprehended for, as pointed out in previous reports, it is a matter of common experience in this Colony that enhanced malaria prevalence is frequently attended by a rise in the incidence of dysentery.

9. *Enteric Fever* :—This disease is answerable for 8 admissions and 3 deaths in hospital as against 15 admissions and 5 deaths in 1904, showing a slight rise in the case mortality. In addition to the cases treated in the public hospitals 143 others were notified under the Infectious Disease Ordinance of 1898 from the various districts of the Island, Black River excepted, an increase of 15 cases on the total recorded last year.

The following table shows the distribution of the disease and again illustrates the view expressed by Dr. Lorans last year as to the influence exercised upon the apparent incidence of the disease by the greater or less frequency with which such cases come under medical observation :—

Districts.		Cases.	Deaths.
Port Louis	...	6	1
Pamplemousses	...	4	...
Rivière du Rempart	...	11	3
Flacq	...	4	2
Grand Port	...	5	2
Savanne	...	8	1
Plaines Wilhems :—			
Bean Bassin	...	1	
Rose Hill	...	5	
Quatre Bornes	...	9	
Phœnix	...	11	
Vacoas	...	5	
Curepipe	...	75	
	—	106	24
Moka	...	7	2
Total	...	151	35

10. Bearing this in mind, it will be noted that the District of Plaines Wilhems, one of the healthiest in other respects, is again that which returned the largest number of cases, viz : 106, of which 75 were notified from Curepipe and 11 from Phœnix. Some of the cases registered at Curepipe from the Military Hospital, are not in reality however chargeable to that locality as the patients were soldiers stationed at Phœnix-Vacoas.

11. Apart from the military cases, an outbreak of some extent and duration, but of moderate virulence, was also observed among the civil population of that township. Enquiry showed that the disease remained practically confined to areas of the town but imperfectly supplied with Mare-aux-Vacoas water and whose inhabitants derived their water supply from the nearest stream, well or river, sources which are at all times exposed to pollution. The attention of the residents having been called to the danger of using such water in the course of domiciliary visits and by the distribution of a printed memorandum by the local Sanitary Authority (Dr. Chevreau), the epidemic gradually subsided.

12. It is to be hoped that in the light of the experience thus acquired, measures will be taken by the local Board of Commissioners to place Mare-aux-Vacoas water within reach of the poorer inhabitants of these areas.

13. *Diphtheria* :—Three patients were admitted into the hospitals for that disease of whom two died. In addition to these cases, 22 others were notified from different parts of the Island with 7 deaths. The distribution of the cases is shown in the following table :—

Districts.		Cases,	Deaths.
Port Louis	...	2	1
Pamplemousses	...	...	...
Rivière du Rempart	...	4	1
Flacq	...	1	1
Grand Port	...	1	1
Savanne	...	2	...
Plaines Wilhems :—			
Beau Bassin and Rose Hill	1	.	
Quatre Bornes	1		
Phœnix and Vacoas	2		
Curepipe	2		
		6	2
Moka	...	9	3
Black River	...	...	...
Total		25	9

Although, as for typhoid fever, accuracy of diagnosis may to a certain extent account for the greater prevalence of diphtheria in the healthier residential districts, yet its incidence as recorded in 1905 is in accordance with the tendency shown by the disease in the past to occur with greater frequency in the colder and wetter regions of the Colony. A comparison of the returns for the last few years reveals the fact that diphtheria is on the increase in Mauritius in spite of the general use of antidiphtheritic serum both as a curative and prophylactic. This would be difficult of explanation were it not for the fact that the Civil Hospital clinical laboratory under the able management of Mr. Maya has been more and more freely taken advantage of for bacteriological investigation with the result that a positive diagnosis has been arrived at in doubtful throat cases which might otherwise have remained unnotified. It may also be mentioned that antidiphtheritic serum has come to be used by some practitioners as a means of diagnosis, the case being regarded as one of diphtheria or not according to the effect produced by the serum.

14. The increase observed in the incidence of diphtheria may only be apparent therefore, but the fact is one which calls for attention on the part of the Sanitary Authorities.

15. *Influenza* :—This complaint is answerable for 1039 admissions, a number which closely approximates that for 1904, viz : 1,036. The percentage of deaths to attacks rose however from 2.31% in 1904 to 4% in 1905, a fact which is no doubt accounted for by less favourable climatic conditions.

16. *Pneumonia* :—The number of admissions for pneumonia shows an excess of 34 over that of the previous year. An increase

is also noticeable in the case mortality which rose from 21.3% in 1904 to 32.4% in 1905. This condition of things is probably connected with the greater severity of influenza during the latter year.

17. *Nephritis* :—This disease accounts for 325 admissions or an increase of 73 over the number admitted in 1904. The severity of the influenza epidemic and the higher prevalence of malaria already referred to are perhaps answerable also for the enhanced incidence of nephritis during the year under review. The mortality from that complaint was 21.5% in 1905 against 17.1% in 1904.

18. *Beri-Beri* :—Only 20 cases were admitted, all of them into the Civil Hospital at Port Louis. They were for the most part new immigrants from China, but six were lascars from steamers in Port Louis harbour.

19. *Measles* :—No admission was recorded for that disease. A case was however notified from the District of Moka.

20. *Syphilis* :—The decrease in the number of admissions for that disease which had been observed in 1904, has unfortunately not been maintained as the admissions into hospital under that head are again, though slightly, on the increase, the figures for 1903, 1904 and 1905 being 368, 352 and 359 respectively. On the other hand, this is redeemed by the fact that the admissions for primary and secondary manifestations have been less by 44 and 35 than in 1904, the increase being represented wholly by tertiary cases.

21. In continuation of the remarks made by Dr. Lorans in the Annual Report for 1904, and as an instance of what is done in other countries, I may mention that a course of lectures was delivered in 1904 by Professor Pontoppidan of Copenhagen to adolescents of 16 entering upon their university career, in which the serious effects of syphilis and other allied diseases were forcibly placed before them. Reference is again made to this subject in the present report in the hope that it will be found possible in the near future to conduct the education of the younger generation on more enlightened principles in that respect so as to guard them against the dangers that may beset their early career as young men. It may not be out of place to allude here to the recent and highly interesting researches of Metchnikoff and Roux on the prevention of syphilis. These investigations can hardly be said to have gone beyond the experimental stage, but they permit of some expectation being entertained that the time is not far removed when some practical means will be discovered of effectually combating the spread of that disease.

22. *Leprosy* :—Nine cases were temporarily accommodated in the general hospitals pending transference to the Leper Asylum or discharge. The figures kindly supplied by the Poor Law Commissioner show that 163 (127 males and 36 females) patients were treated in the Leper Asylum during the year 1905 of whom 35 were discharged and 18 died. The admissions during the year numbered 59. As pointed out in previous reports, these figures cannot be used for purposes of comparison, nor do they give a reliable indication of the sanitary condition of the Island in regard to Leprosy. Admission into the Asylum is only voluntary and there is no compulsory notification of cases so that no definite conclusion can be drawn from official records as to the progress or otherwise of the disease.

23. *Anæmia* :—A further decrease is observable in the number of admissions under that head. The figure for 1905 stands at 389 against 655 and 513 for 1903 and 1904 respectively.

24. In view of the severity of the malaria outbreak, the contrary might have been expected. Whether the occurrence is attributable to the scheme for the free distribution of quinine which was pretty extensively applied in 1904, or to more accurate diagnosis in cases of ankylostomiasis, it is difficult precisely to say, but there are reasons to believe that these causes may not have been altogether inoperative in bringing about that result.

25. *Ulcers* :—The epidemic of Tropical Sloughing Phagedaena described at length in the last yearly report, and which had greatly subsided towards the end of 1904, continued into 1905 during which, however, the affection assumed a less severe type and a more distinctly sporadic character. The number of cases admitted into hospital was only 223 against 852 in 1904.

26. *Ankylostomiasis* :—In his Annual Report for 1904, Dr. Lorans referred to the existence of this disease which is apparently on the increase in the Island. During the year under review, 47 patients harbouring the parasite were attended to at the various hospitals against 14 in the previous year. Although the disease has come now to be more readily recognized, yet it is probable that a number of cases, specially in the early stages, still escape detection. It is worthy of notice that labourers employed in fields soiled with fresh excreta seem to be particularly prone to become infected.

27. *Plague* :—The admissions for this disease numbered 32 against 54 in 1904. This decrease in the number of cases received in the public hospitals corresponds with the general lowered incidence of plague observed during the year covered by this report. The cases were immediately isolated and subsequently removed to the nearest lazaret if the patients' condition permitted.

28. *Mental Diseases* :—The number of patients temporarily admitted in the general hospitals for this cause amounted to 43 against 49 in the preceding year. This, as was shown in previous reports, is no indication of the prevalence of mental affections among the population of the Colony as the admissions of such patients into the general hospitals may be due to accidental causes and are therefore apt to vary very widely according to circumstances. To obtain reliable information on this subject, we must turn to Dr. Paddle's report herewith forwarded as an annexure, and which supplies detailed information on the administration of the Lunatic Asylum at Beau Bassin. A slight decrease was observed in the number of admissions into the Asylum during 1905 and a similar decrease in the daily average number of patients under treatment in the Institution. There were 411 patients on the roll of the Asylum proper on 31st. December 1905 and 100 in the Lunatic Branch of Barkly Asylum, besides 52 certified lunatics confined under probation to the care of relatives and friends. The proportion of insane to population was 1.49 per thousand or 1 in 669 as against 1 in 655 in 1904 showing a slight improvement. The proportion of criminal to ordinary lunatics in confinement, when at its highest, was 4.47 % of the daily average.

29. The districts which furnished the greatest number of new admissions were Port Louis and Plaines Wilhems, and in the cases in which it seemed possible to assign a cause to the patients, condition, epilepsy, gunjah smoking and drink appear to have been the determining factors.

III—METEOROLOGICAL CONDITIONS OF THE SEASONS AND THEIR PROBABLE EFFECTS WITH REGARD TO SICKNESS.

Repetition of what has already been stated in other reports cannot be avoided when dealing with this subject, and we have once more to consider the effect on the evolution of local diseases, of such agencies as rainfall, temperature, humidity and wind velocity.

2. Reference to annexure I (b) kindly supplied by the Director of the Royal Alfred Observatory shows that the total rainfall of 1905 exceeded that of the preceding year by 24.79 inches i.e. about one third as much rain fell in 1905 as had fallen in 1904. It will also be observed that the rains were more evenly distributed although two maxima were recorded in January and March.

3. The maximum and minimum temperature stood somewhat higher both in the sun and on the grass and exhibited a shorter range of variations, but whatever beneficial effect this may have had in certain directions, was probably effectually counterbalanced by the marked increase in the degree of atmospheric humidity and the no less noteworthy lower range of wind velocity.

4. These unfavourable natural conditions being in no way counteracted by the observance of some of the most elementary rules of hygiene among the poorer and illiterate classes of the population, have no doubt powerfully contributed to the unsatisfactory state of the public health during the year under review.

5. Hence we find that people whose powers of resistance had been seriously undermined by the severity of the malaria outbreak, were less able to withstand the effects of such other diseases as influenza, pneumonia, diphtheria and their sequelae, the development and fatality of which are so much influenced by unfavourable climatic conditions.

6. Chart II illustrates the relationship between dysentery and the changes produced in the water supply by the rainfall. The curve of admissions for that complaint rises rapidly after the heavy rainfall of January and attains its acme after the second rainfall maximum in March when the pollution of the streams and rivers by surface washings from cultivated fields, &c., was probably at its highest.

IV.—RECURRANCE OF PARTICULAR DISEASES.

Malaria.—A comparative statement of the number of admissions in hospital for this complaint during the past seven years is given in the following table:—

Years.	1899	1900	1901	1902	1903	1904	1905
No. of cases.	4,152	2,848	4,182	3,360	4,788	3,039	5,123

2. It will be observed that the admissions during 1905 were the highest recorded for the seven years under review and that malaria shows a tendency to recur with enhanced virulence every second year.

3. Chart I which gives the monthly number of admissions and the rainfall for the corresponding periods, reveals, on comparison with the chart for last year, certain peculiarities. In the first place, it will be noticed that March in both years accounts for

the highest number of admissions. Following upon the increased rainfall of November and December 1904, an increase is observable in the admissions for malaria which rise sharply until the maximum of 1166 is attained in March 1905. So far this was in agreement with previous experience, but whereas the rainfall rose to a second maximum in March, the malarial curve is apparently unaffected thereby and shows a steady downfall until it reaches the minimum of 176 cases in September. In 1904, on the other hand, the heavy rainfall recorded in March was followed by a second rise of the malarial curve in May, but the epidemic rapidly declined thereafter, whereas that of 1905 was more prolonged and made itself distinctly felt until the end of the second quarter. The conditions which favoured this state of matters are probably to be found, as stated in the preceding chapter, in the more abundant rainfall and the higher humidity that were prominent meteorological characteristics of 1905, coupled with reduced wind velocity. The rains were, moreover, more equally distributed than in the preceding year and no prolonged period of drought intervened to dry up the pools and puddles and other collections of water formed during the rainy season. These conditions all tended to promote excessive vegetation and foster the multiplication of mosquitoes. The measures that were applied during the year to reduce the incidence of malaria are described in another part of this report and it is sufficient here to say that among the principal difficulties met with must be counted the indifference and apathy of a large proportion of the native population whose active and intelligent cooperation, if it could be secured, would go far to ensure the success of any scheme of that nature. Yet it does not appear that the difficulty is insuperable and were sufficient funds available for that purpose, a practical plan could I think be devised on the lines followed in certain other malarial countries for a vigorous and effectual antimalarial campaign.

(Chart II)

4. *Dysentery*.—The curve shown on the accompanying chart is not dissimilar to that illustrating the admissions for malaria. Attention has already been called to the relationship which exists in the prevalence of these two diseases. The influence of the rainfall upon the incidence of dysentery has been referred to in the chapter dealing with the meteorological conditions of the year.

(Chart III)

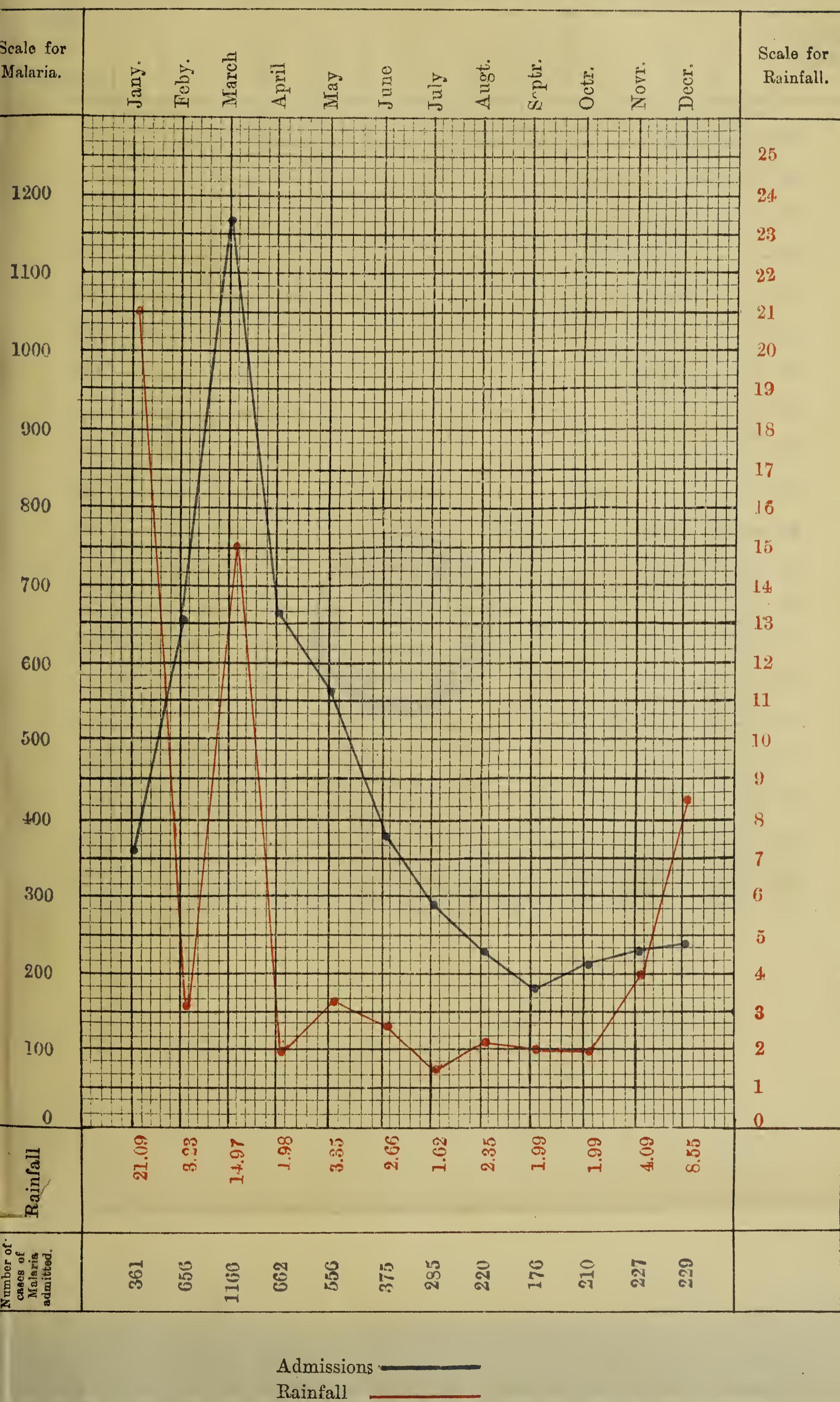
5. *Tuberculosis*.—Chart III gives a graphic representation of the monthly admissions and deaths from that disease in the hospitals of the Colony. The curve is irregular and cannot be said to point to any special prevalence of the disease at any particular period of the year, but this may possibly be accounted for by the limited information at our disposal. Patients are apt to seek admission into hospital at times when the severity of the season brings on an aggravation of their complaint or when the distressing manifestations of the disease in its last stage render their treatment at home a matter of practical impossibility. The admission rolls of the public institutions afford but imperfect information therefore regarding the seasonal prevalence of tuberculosis in the island.

(Chart IV).

6. *Bronchitis*.—This disease, as will be observed from the appended chart, showed two waves of high incidence during 1905. The first was probably due to exposure to rain during January while the second seems to have been connected with the prevalence of influenza during the cold season.

CHART I.

Chart showing the monthly admissions for Malaria as well as the monthly Rainfall during 1905. (Chap. IV para. 3.)



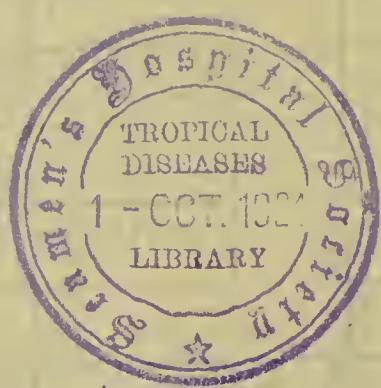
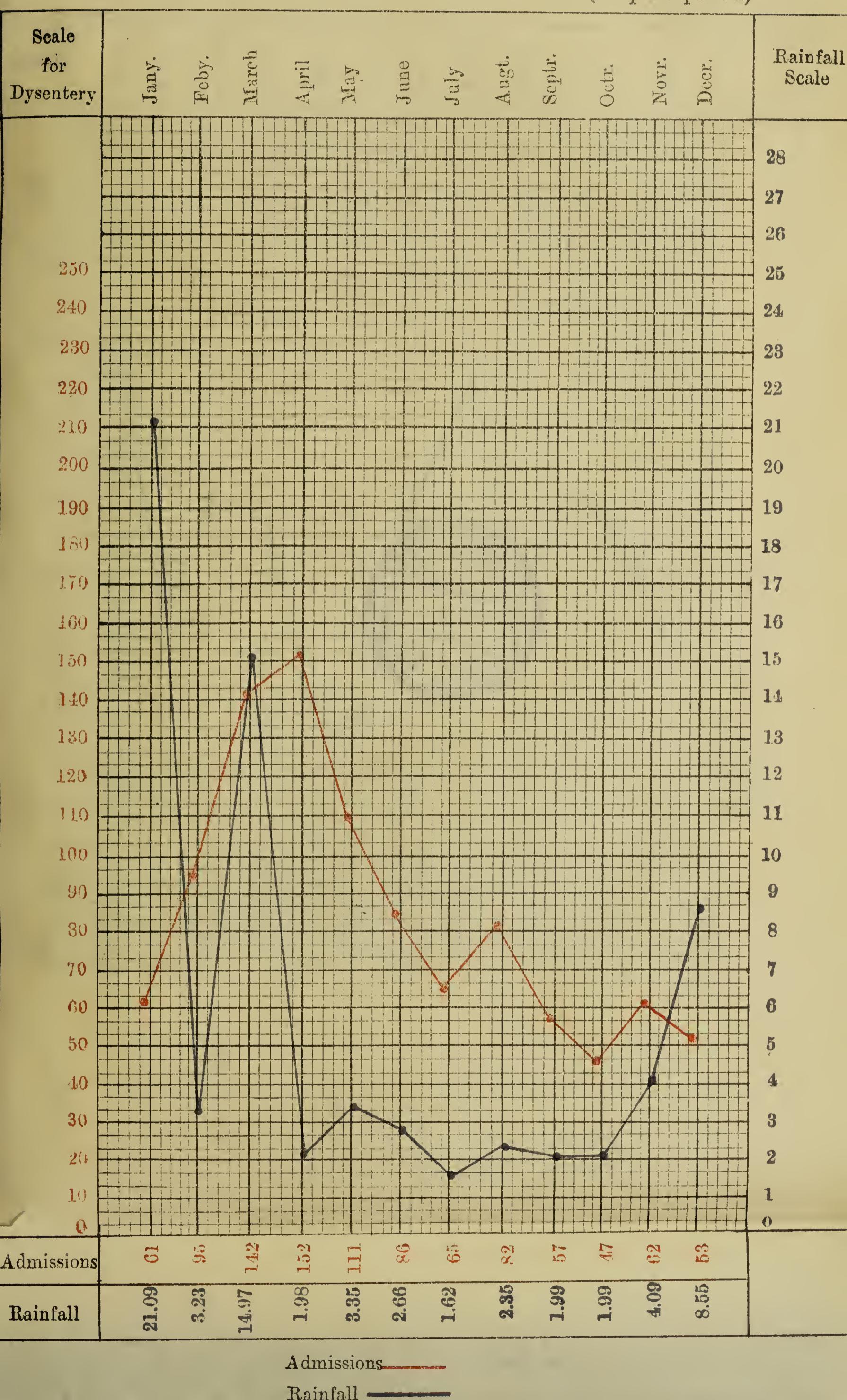


CHART II

Chart showing the monthly number of admissions for Dysentery-1905

(Chap. IV para. 4)



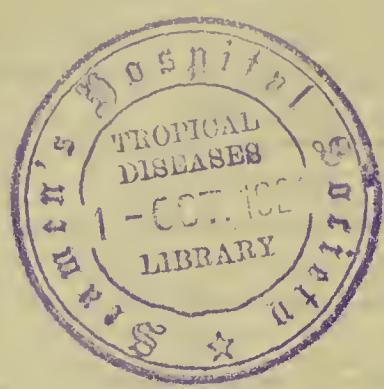
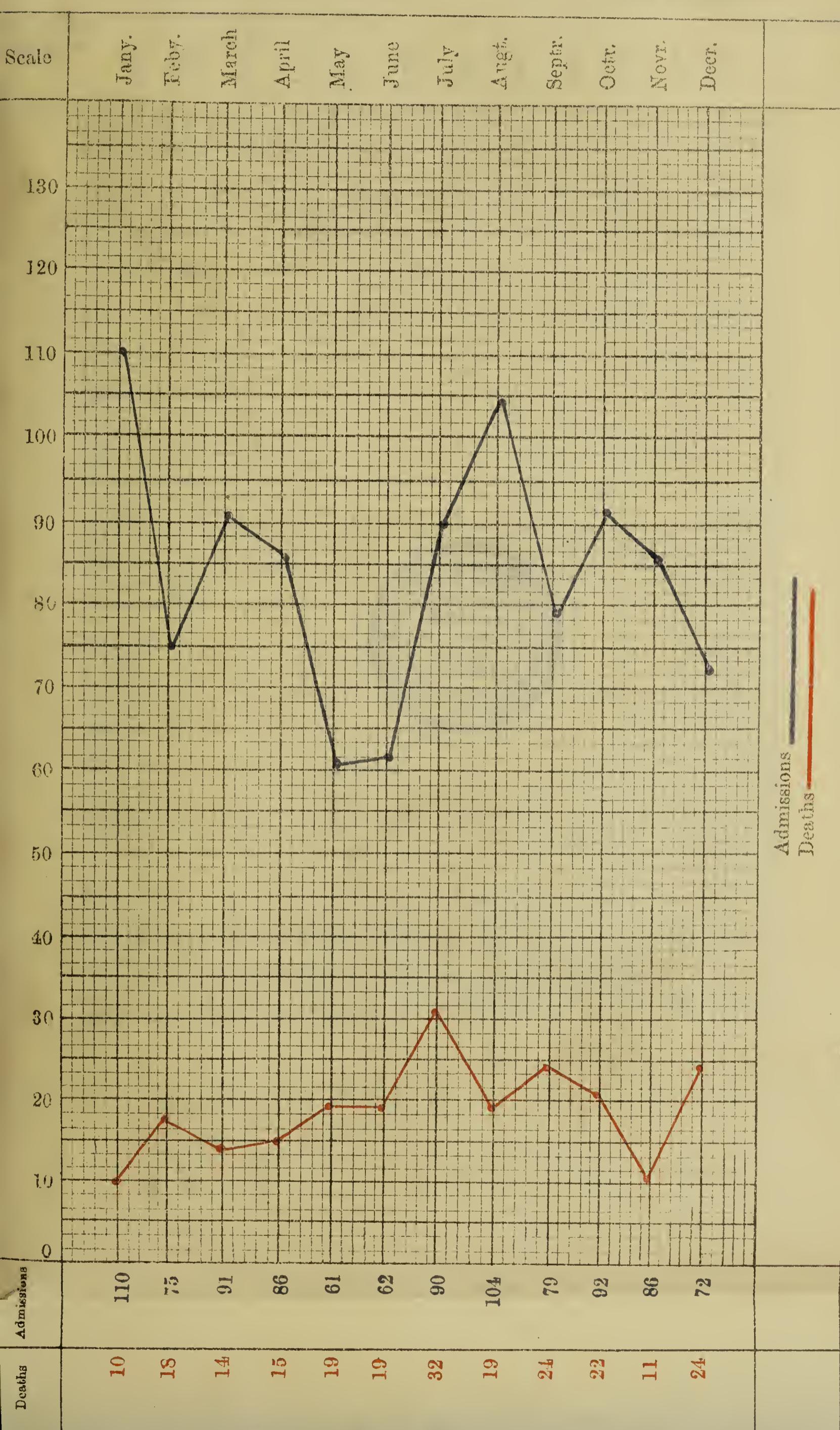


CHART III

Chart showing the number of admissions for, and deaths from, Tuberculosis
during each month of 1905

(Chap. IV para. 5)



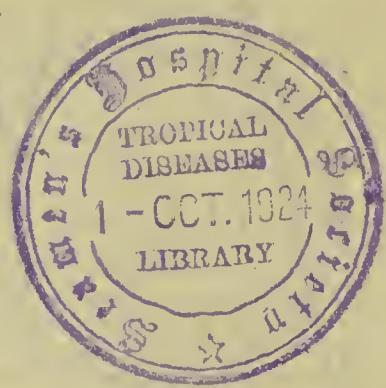
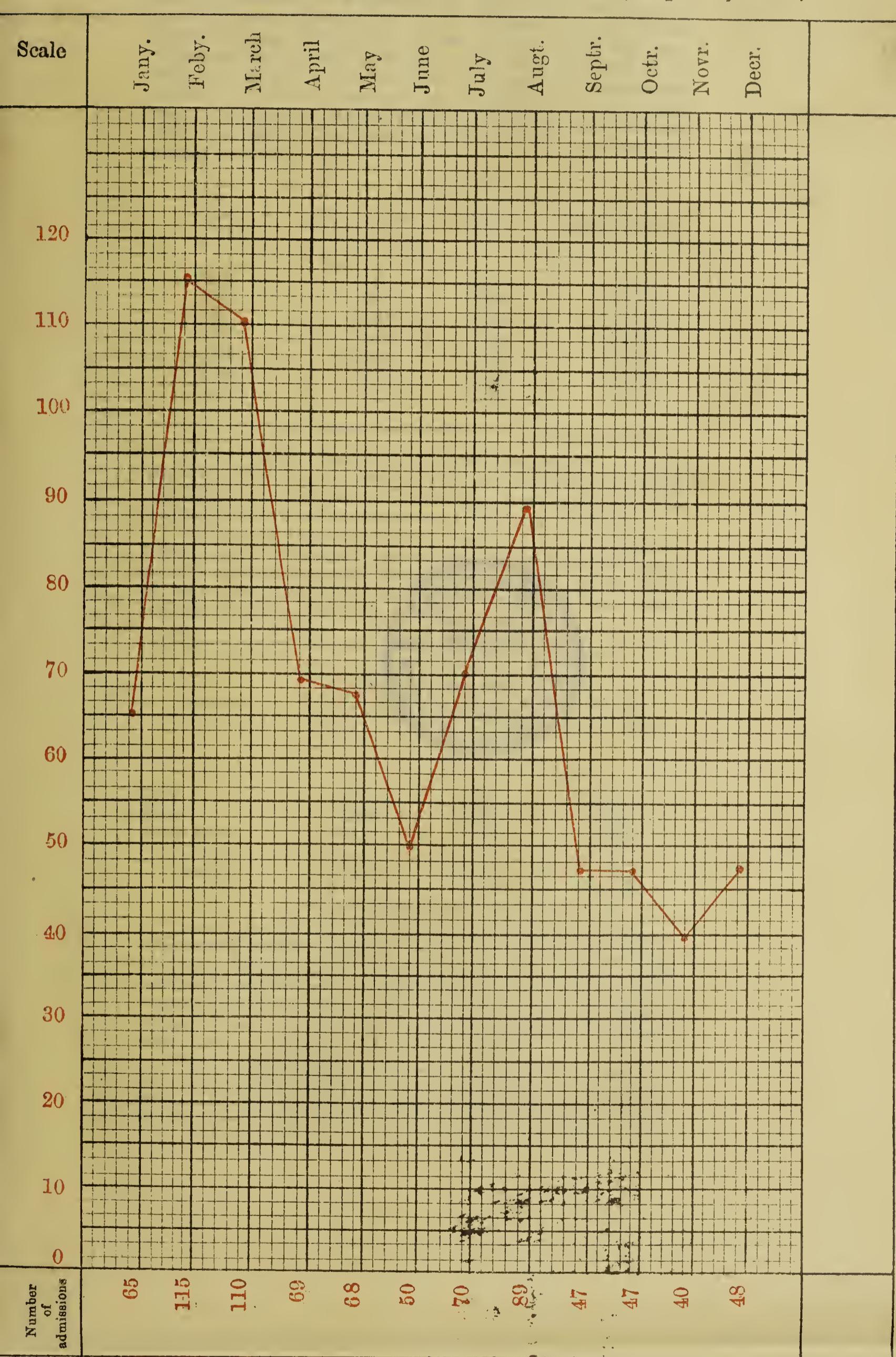


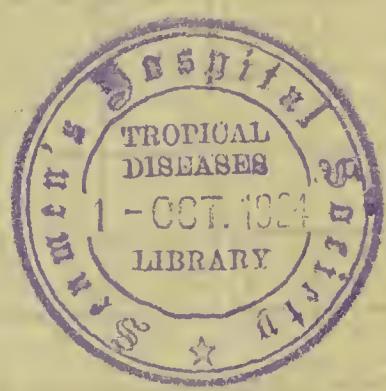
CHART IV.

Chart showing the monthly number of admissions for Bronchitis

during the year 1905.

(Chap. IV para. 6.)





7. *Plague* :— A full critical survey of the incidence of this disease during the years 1900-05 will be found in Dr. Blackburn's report now ready and which will be shortly submitted to Government. It is consequently not deemed necessary to consider here at length the course followed by this disease during the year 1905 nor the various factors which may have influenced the epidemic. Suffice it to say that the efforts of the Plague Authority and his staff have met with no inconsiderable measure of success, inasmuch as on referring to the table below, the epidemic of 1905 will be found to have been the smallest in point of numbers recorded since the introduction of plague in 1899 :—

Years.	No. of cases	Deaths.	Death Rate o/o
1899 ..	1416	1117	78.9
1900 ..	796	593	74.5
1901 ..	1093	805	73.6
1902 ..	506	386	76.3
1903 ..	1395	1035	74.2
1904 ..	568	449	79.0
1905 ..	308	251	81.5

8. On the other hand, the increased fatality of the disease seems to indicate that it has lost none of its virulence and that the reduced number of cases recorded during the year is not to be attributed to any natural tendency of plague to die down.

9. The war waged against rodents to which Dr. Lorans referred in last year's report, was continued with unabated vigour in 1905. In this connection, the table given below which shows the amount of work done in that direction in Port Louis alone may not be without interest.

Rodents	No. captured and found dead from poison.	No. of females with young.	No. of youngs.
Rats ..	49,682	4,605	38,127
Mice ..	9,993	882	4,441
Musk Rats	4,732	417	1,075
Total	64,407	5,904	43,643

The number of these animals destroyed may therefore be laid down at 108,050. Of these 4107 rats, 2113 mice and 373 musk rats, making a total of 6593 animals were microscopically examined and 113 rats, 33 mice and 9 musk rats found to be infected and 67 rats, 41 mice and 3 musk rats were regarded as suspect. In the rural districts, 20362 rodents of all kinds were destroyed.

10. Simultaneously with the destruction of rats, sustained efforts were made in the disinfection of infected or suspected premises, 2411 houses being disinfected in Port Louis alone during the year either on account of human plague or because there

were reasons to apprehend that they might be visited by the disease, as more fully described by the Plague Authority in his report. It may also be mentioned that only two indigenous foci of plague were found to exist during the latter half of the year viz : Port Louis and the town of Rose Hill and Beau Bassin.

11. *Surra* :—This epizootic assumed a severer character in 1905 than it did in 1904. The total number of bovines reported dead during the year under review was at 295 as compared with 260 in the previous year. The corresponding figures, so far as equines are concerned, are 1007 and 826.

12. The following table gives the progress of the epizootic during each of the months of 1904 and 1905 : -

Year.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
1904	111	157	274	245	109	47	14	15	20	15	40	39	1086
1905	71	124	248	208	136	100	52	38	28	70	75	152	1302

13. *Small-Pox* :—During the epidemic of this disease which occurred in 1905, only two cases were admitted into the general hospitals, all of which were rapidly removed to special lazarets provided for that purpose. In no instance did the infection show any tendency to spread in the hospital in which the patients were originally admitted. Further information on this and other diseases treated in the general hospitals of the Colony will be found in the following Chapter and Statement II.

V.—SMALL-POX.

This Island which had been free from small-pox since 1892 was visited by an outbreak of that disease in the course of 1905. The existence of small-pox on this occasion was first established on the 26th. of February. The patient was a Custom House Officer residing in Corderie Street. Although this was the first case registered, subsequent discoveries showed that other cases had occurred previously, the oldest one at Grand River North West, on a cartwright by trade. This man who also earned his living as a fisherman, stated that on the night a steamer arrived with two cases of small-pox on board in January 1905, he was out fishing at no very great distance from where she anchored. He however denied having had any communication with the vessel.

2. A searching enquiry failed to elicit the existence of previous cases of small-pox in the Colony.

3. The disease at first showed a marked tendency to spread as may be gathered from the following table :

Months.	No. of cases.		
February	2
March	35
April	43
May	28
June	24
July	5
Total	137

4. The epidemic was at its highest in April when 43 cases occurred, but the outbreak had been successfully combated by the middle of July, the last case being detected on the 19th. of that month.

5. In all, 137 cases of small-pox were registered. The disease was of a virulent type and in not a few instances assumed the confluent or semi-confluent form. The majority of patients, however, suffered from the discrete form or from varioloid which on several occasions was of such mild character as to recall the description of the Trinidad disease which came to be named "Varioloid-varicella" and gave rise to considerable difficulty of diagnosis.

6. The number of deaths was 16 giving a mortality of 11.68%.

7. The following table shows the number of cases which occurred in each district : -

Districts	Cases	Deaths
Port Louis	94	12
Pamplemousses	7	—
Rivière du Rempart	11	—
Flacq	3	—
Grand Port	3	1
Savanne	5	—
Plaines Wilhems	4	1
Black River	1	1
Moka	9	1
Total	137	16

8. Only 43 cases were reported from outside Port Louis, and in regard to these, in not a few instances infection could be traced to the latter place, the more densely populated parts of which were the most affected.

9. The following statement shows the incidence of the disease, the deaths as well as the fatality at various age periods:-

Age periods	No of cases	Deaths	Incidence	Fatality
0—5	12	2	8.82 o/o	16.66 o/o
5—10	13	1	9.56	7.69
10—20	24	1	17.65	4.17
20—30	42	3	30.88	7.14
30—40	19	3	13.96	15.79
40 & up	26	5	19.12	19.23

Note :—The age of one patient could not be ascertained.

10. It will be observed that 12 cases occurred on children five years old or under five. Of these twelve children, nine had not been vaccinated at all or had been unsuccessfully vaccinated, one aged 5 had been vaccinated and developed varioloid, while an infant 5 months' old was vaccinated only early enough to modify the evolution of the disease, and recovered. Finally, an infant, 20 days' old, whose parents occupied a room next to

that where a case of small-pox had been concealed, was vaccinated on the discovery of the case. Confluent small-pox developed eight days after vaccination, but the patient recovered while of the unvaccinated children at this age period, two died.

11. The fact that primary vaccination is very generally applied in Mauritius probably accounts for the small number of patients in that age period, while the higher percentage of cases between 10 and 30 years may be attributed to the gradual weakening and disappearance of the protection conferred by a first operation. The majority of persons in these age periods must have been young and still under the influence of their primary vaccination at the time of the 1891-1892 epidemic and did not therefore benefit from the extensive revaccination which took place then. Primary vaccination, on the other hand, may yet not have been without effect in lowering the percentage of deaths among persons between 10 and 30 in 1905 in spite of their greater liability to be attacked.

12. The experience acquired in the course of this epidemic has once more confirmed the fact that the more recent, apparent and numerous the marks of vaccination the less severe the attack of the disease.

13. Not a single case showing good vaccination marks terminated fatally. In four of the fatal cases, only faint marks were visible, while in the remainder they were either absent or unrecognisable. In only five persons showing good vaccination marks did the disease assume the confluent or semi-confluent types. In one case, a man said to have been recently vaccinated with success, contracted the disease, but further enquiry seemed to establish that the patient who was only seen shortly after vaccination, had in reality developed spurious vaccinia.

13 bis. The following gives a classification of the cases into the various types :—

Types	Cases
Haemorrhagic...	... 4
Confluent ...	... 22
Semi-Confluent	... 9
Discrete ...	... 40
Varioloid or Modified	... 55
Not stated ...	... 7
Total ...	137

14. As soon as the first case of small-pox was detected, the house was at once placed in quarantine. The patient was removed the next day to Grand River North West Lazaret which, in the meantime, had been appropriated for that purpose. All the inhabitants of the premises were, after vaccination, sent to the segregation camp connected with that Lazaret.

15. This method of dealing with patients and contacts was followed throughout the epidemic, exception being made in a few instances where the patients were discovered cured or almost cured and when isolation could be secured without danger to the surroundings ; but this procedure was adopted only in out of the way localities. As the epidemic progressed, however, it was found unnecessary to segregate the occupiers of the whole premises, only the immediate contacts were quarantined, the others being submitted to revaccination and medical surveillance for fifteen days.

16. Immediately upon removal of the patient, the house or room he lived in was disinfected. The room and its contents were first sprayed to put down the dust. All clothes, bedding, &c., were securely packed in closed bags and sent to the steam stove in the specially fitted carts provided by the Department. Whenever practicable, however, advantage was taken of the mobile stove to have all such articles disinfected on the spot.

The floor, walls, ceiling, and the furniture were then thoroughly sprayed with a soluble disinfectant and scraped, all scrapings being immediately burnt. The room was finally fumigated with sulphur gas generated from a burner after all cracks and fissures had been pasted over to make the place as air tight as possible.

17. Infected houses were only allowed to be re-occupied after fifteen days.

18. Articles, materials and buildings not amenable to satisfactory disinfection or which were in such a soiled or damaged condition as not to warrant such treatment, were destroyed by fire, compensation being paid to the owners in every case.

19. The method of procedure above described gave exceedingly good results as in not a single instance could contamination be traced to a house previously disinfected.

20. In addition to the measures of isolation and disinfection, the success of which has led to their being referred to in some detail, special importance was attached to vaccination and revaccination as the most efficient means of combating the spread of the disease.

21. As already stated, as soon as a case of small-pox was detected, all the contacts were vaccinated. Bearing in mind the possibility of aerial convection, but still more of recent communication with the infected premises, vaccination or revaccination was made compulsory for all residents of the locality in which the case had occurred.

22. The provisions of Ordinance No. 10 of 1889 were taken advantage of to attain that object by the Medical Department with the Governor's approval. As soon as an area was declared to be infected or threatened with small-pox, the vaccination of the residents was commenced and carried on as rapidly as possible. To that end the services of a number of medical practitioners were engaged in addition to the ordinary public vaccinators.

23. The following statement gives the number of vaccinations performed by each officer so employed during the period covered by the epidemic:—

Medical Practitioners.				No. of vaccinations.
Dr. Gromitt	...	...	...	1,081
„ Masson	...	...	...	1,440
„ Blackburn	...	...	...	238
„ Sinnatambou	...	...	...	434
„ V. Monty	...	...	...	2,264
„ E. Portal	...	...	..	997
„ L. Vinson	...	...	...	943
„ L. Castel	...	...	...	197
„ P. Chevreau	...	...	...	1,581
„ F. Momplé	...	...	...	619
„ E. Vinson	...	...	...	793
„ H. Legall	...	...	...	656
„ Milne	...	...	...	860
„ L. Portal	...	...	...	60
„ O. Guérin	...	...	...	45
„ P. Chauvin	...	...	...	536
„ W. Ulcoq	...	...	...	5,737
„ V. Dubois	...	...	...	123
„ S. A. R. Monty	...	...	...	1,012
„ E. de la Roche	...	...	...	47
„ Tenant	...	...	...	319
„ E. Harel	...	...	...	142
„ G. Leclézio	...	...	...	1,538
Total	...	...	...	21,662

24. The difficulties met with under any circumstances in an attempt to stamp out such a disease as small-pox were enhanced here by the disinclination shown by the illiterate classes of the population to declare the cases. Small-pox is notifiable under Ordinance No. 47 of 1898, but although the medical practitioners all willingly complied with the Law, yet not a few cases were discovered that had not been declared because the parents or relatives had not sought for medical advice. Cases were concealed specially among the Indian population, and the reason for this is probably to be found in their religious belief that the disease is a sacred visitation which should in no way be interfered with. As a result, the patient is usually secluded in a separate room and only visited by those in attendance on him. Great cleanliness is prescribed both of himself and his immediate surroundings and he is kept on cooling drinks and light and easily digested food. One effect of this custom is that the patient frequently recovers, and it must be admitted that the self-imposed isolation thus practised is likely to some extent to check the spread of infection and diminish the risk of contamination from these concealed cases. So deeply rooted is the prejudice against notification among that section of the population that many of them exposed themselves to the heavy penalties provided in the Law rather than declare their cases. This led to 24 persons being prosecuted by the local Sanitary Authorities before the competent courts for concealment of small-pox cases, 23 of whom were convicted and fined from Rs 10 to Rs 200.

25. To counteract this practice, a fee was offered and paid to all persons who revealed the existence of a genuine case of the disease. The result proved very satisfactory as the Medical Department was thus enabled to discover a number of cases which might otherwise have acted as fresh foci of infection.

26. In the earlier days of the epidemic, the Sanitary Authorities were confronted with another cause of difficulty in the opposition offered to the enforcement of compulsory vaccination in the infected or threatened areas. The infliction of a heavy fine by the Court in a few cases in which the parties were prosecuted proved very effective in rapidly removing all resistance.

27. Some anxiety was felt at first lest the stock of lymph at the Medical Stores might prove insufficient to meet the exigencies of the moment, the prevalence of surra among the live stock of the Island making the preparation of vaccine locally undesirable. Lymph was accordingly applied for by cable from Natal, Réunion, Madagascar and Ceylon and the ready response with which our request met is here gratefully acknowledged. An abundant supply was soon, however, also received from Europe which permitted, as already mentioned, of vaccination being freely applied.

VI. VACCINATION.

Whereas 10,524 children were vaccinated by the Public Vaccinators in 1904, the corresponding number for 1905 rose to 11,501. The Law fixing a delay of 10 months for the primary vaccination of all children born in the Colony, the increase above referred to is in part due to the high birth-rate of 1904, but more particularly no doubt to the small-pox epidemic which occurred during the year covered by this report, the existence of which must have induced many parents to apply for the early vaccination of their babies.

2. Certificates of insusceptibility were issued in 229 cases only against 268 in the preceding year. The proportion of successes has therefore been 98 $\frac{1}{2}$ %, a further progress on the already very satisfactory results obtained in 1904 when the successes

stood at 97.45 o/o. The result of one vaccination in the District of Grand Port could not be ascertained as the parents did not bring back the child for examination.

3. The number of births for 1904 was 14,103 and that for 1905, 14,043, the average for the two years being 14,073. Proceeding for purposes of comparison on the same lines as in the last annual report, it is seen that 81.7 o/o of the average number of children born during these years were vaccinated by the Public Vaccinators in 1905, which constitutes a marked increase on the figure for 1904 which was 74.01 o/o. Now, if it be borne in mind that a number of children die before they have been vaccinated while a fair proportion of others, belonging to the better classes are vaccinated by private practitioners, it will be apparent that very few of the children born during these two years who were still alive at the expiration of the time fixed by law for vaccination remained unvaccinated.

4. With the exception of a certain quantity of lymph kindly supplied at the commencement of the small-pox outbreak by the Governments of Réunion and Madagascar, the lymph used during 1905 was obtained, as in previous years, from the Chambon Institute of Paris and save in the case of a few consignments, was found generally reliable.

VII. SANITARY ADMINISTRATION.

es III and IV.

The usual tabular information on the work done by the staff of Sanitary Inspectors and Guards is given in Annexures III & IV. In accordance with the practice adopted in previous reports, Port Louis is dealt with separately, and the other districts all taken together.

2. *Port Louis* :—During the year covered by this report, the Sanitary Officers paid 13,143 visits to private premises, made 65 inspections of common lodging houses and 1663 of shops, bake houses, markets, slaughter houses and butchers' shop. On 3720 occasions they were called upon to perform special duties, carry out enquiries, attend cremations, exhumations, &c.

3. The Government Establishments, public and gratuitous private latrines, cemeteries, noxious factories, water courses, public fountains and camps were the subjects of 2,165 visits. The performance of the night soil service of the town was checked on 1,996 occasions and 2287 visits were paid to stables, cowsheds and pigstyes both in the town and districts.

4. During the period under review, the staff were employed on quarantine duty for a total of 88½ days' work and they attended court on 382 occasions.

5. The total number of contraventions of the Sanitary Regulations for the sale of food unfit for consumption, defective latrine service or scavenging, &c., was 2,789 of which 204 had not been finally disposed of when the year came to a close.

6. The scavenging service and the general care of the urban area of Port Louis, which had been unsatisfactory during 1904, showed no improvement during 1905 when in spite of repeated representations made by this Department, the streets, gutters and streams in several parts of the town were left unattended to for prolonged intervals. In accordance with the provisions of Ordinance 23 of 1903, the Municipality was called upon on 748 occasions to abate nuisances detected and, out of these, 199 had received no attention at the end of the year.

7. The good effects resulting from the application of the Swine Destruction Ordinance by the Police, have continued to be felt throughout the year, when 258 stray pigs were killed in the District of Port Louis.

8. No special provision having been made for the performance of the scavenging service of the extra urban area, this was, as before, attended to by sweepers and scavengers obtained from the sanitary band, assisted by a number of carts for the removal of refuse.

9. As has been mentioned in the preceding yearly report, the old method of the conveyance of the night soil matter by carts was resumed in the latter part of 1904. This system which is not a commendable one for a town of the importance of Port Louis, was continued during 1905 and although surra prevailed to a certain extent, the epizootic did not cause any intermission in the night soil service, which was on the whole as satisfactorily performed as such a service can be.

10. During the course of the year, 812 public nuisances were reported and 1757 notices were served for the removal of private nuisances.

11. During the year under reference, the occurrence of 6 cases of typhoid fever in Port Louis was reported to the Sanitary Authority. Although this figure favourably compares with 9 for 1904, the fact still deserves attention in connection with the quality of the water supply of the town which has remained unchanged.

12. The extension of the water carriage system to the Line Barracks area, in district No. 4, was completed during the year, 2,121 feet of underground sewers being constructed in that locality. Practically all the premises in the section of the town already drained have been provided with water closets. The drainage works in the central portion of the town, district No 2, were begun in July, and, at the end of the year, 4536 feet of underground sewers had been constructed.

13. The inspection of Common Lodging Houses and insanitary premises in Port Louis was continued during the year by the local Sanitary Authority as part of the duties of his appointment, and 519 orders were issued.

14. As before, the Sanitary Inspectors bestowed special attention to the milk trade ; 1404 samples were taken and tested by them. In cases where the seller contested the opinion of the examining Officers or when there was reason to doubt the correctness of the results arrived at by them, samples of the suspected milk were submitted to the Government Analyst for chemical examination.

Annexure IV.

15. *Rural Districts* :—Annexure IV is the usual statement of Sanitary contraventions, collections, &c in the rural Districts during the year.

16. The number of contraventions was 1,427. In 1369 cases, prosecution was resorted to and the fines amounted to Rs 4,921.60. Out of 7,448 notices served for the abatement of nuisances, 678 had not been complied with at the end of the year. The fines imposed by the Magistrates on 562 persons who were prosecuted for non-compliance with notices amounted to Rs 1,703.42.

17. The markets and cemeteries under the charge of this Department yielded collections to the amount of Rs 25,200.25.

18. In the four public abattoirs under the management of this Department, the total number of animals killed was 3,544.

19. Except in a few instances, the general upkeep of the estate camps has not been satisfactory during the year, the reports of the sanitary authorities of Grand Port, Savanne and Plaines Wilhems especially being unfavourable on this subject. As has already been remarked on previous occasions, the presence of loose pigs in the camps of certain estates has again been a source of nuisance, and the difficulties met with by the Sanitary Officers in dealing with this contravention have remained numerous and often unsurmountable.

20. The following is a list of the establishments coming under the denomination of noxious factories which have been authorised during the year :—

Bambara curing factories	...	...	...	...	2
Soap factory	...	...	...	...	1
Manure factory	...	...	...	...	1
Aloe-fibre factories	...	...	...	...	5

21. The condition of the water supplies has remained unchanged during the year throughout the Colony, and the subject therefore calls for no special remarks on his occasion.

VIII

HOSPITALS, ASYLUMS AND DISPENSARIES.

No important alteration took place during the year 1905 in the number of Hospitals, Asylums and Dispensaries of the Colony under the control of the Medical and Health Department. The reopening of Souillac Prisons during the year led, however, to the equipment of a small infirmary attached to that establishment.

2. As a consequence of the general unhealthiness of the year, a larger attendance of patients than in the previous year, was recorded at the 29 Dispensaries in existence, the number rising to 59,400 as compared with 50,423 in 1904. The assistance given at these institutions included 1688 minor and four major operations, the latter being emergency cases the urgency of which did not allow of the patients' previous removal to hospital.

3. The following table gives the usual statistical information in regard to the various Hospitals including those attached to the Prisons and Reformatory :—

Hospitals.	Remaining on 31.12.04.	Admissions.	Deaths.	Total cases treated.	Discharged and dead.
Civil Hospital...	126	6,225	457	6,351	6,183
Port Louis Prisons	3	1,141	7	1,144	1,126
Long Mountain	13	594	69	607	592
Poudre d'Or ...	27	1,431	52	1,458	1,483
Flacq ...	40	1,971	119	2,011	1,974
Grand Port ...	28	2,374	134	2,402	2,376
Savanne ...	10	944	56	954	927
Barkly Asylum	82	3,668	258	3,750	3,646
Lunatic Asylum	28	475	36	503	479
Beau Bassin Prisons ...	18	1,020	30	1,038	1,023
Reformatory ...	.....	72	.....	72	72
Moka ...	13	820	49	833	820
Total ...	388	20,735	1,267	21,123	20,651

IX—MISCELLANEOUS.

Port and Quarantine Work.

The number of vessels boarded by the Health Officer amounted to 226 during 1905. Of these, 174 were admitted to pratique and the remainder, 52, were placed in quarantine; 42 temporarily, for purposes of disinfection, 8 to complete their period of quarantine as they came from infected ports within the incubation period of the diseases for which quarantine was ordered, and the remaining 2 on account of the occurrence of small-pox on board.

2. Flat Island was once used during the year for quarantining the passengers and the patients of the S.S. "Ashruff" on board of which small-pox cases had occurred.

3. Cannoniers' Point was twice occupied during the year. On the first occasion in connection with the case of the S.S. "Secunder" which arrived from Bombay with small-pox on board, and a second time for the disinfection of Indian Immigrants landed ex S.S. "Surada".

*Laboratory Work.***Annexure.**

4. The medico-legal investigations carried out by the Government Analyst as well as the work done by him as Analytical Chemist are described in Dr Paddle's annexed report in which he calls special attention to the desirability of fixing a local standard of purity for milk sold in the Colony and to that of further improving the quality of the water supplied from the Mare-aux-Vacoas.

5. The small clinical and bacteriological laboratory attached to the Civil Hospital under the skilful management of Mr. Maya, was fully taken advantage of both by the medical profession and the public. The growing success and popularity of that laboratory is an indication that the creation of a fully equipped and well appointed bacteriological institution has become a necessity in this Colony.

Anti-malarial Measures.

6. The campaign against malaria was continued during 1905 with as much energy as the limited resources of this Department and of the Malaria Committee permitted. The principal effort was made at Pamplemousses village which is notorious as one of the most fever-stricken localities in the Colony. The measures carried out comprised certain works of no inconsiderable magnitude, viz: the drying up of the shallow pond known as Bassin Mélotte the waters of which are now canalised, and the construction of a large masonry channel to dispose of the waters forming the Mon Plaisir pond and marsh. This work is as yet unfinished, but hopes may reasonably be entertained that its effect will be even more beneficial than that of the Bassin Mélotte drainage operations which are admitted by the neighbouring residents to have distinctly reduced the incidence of malaria among them.

7. In the district of Port Louis, a substantial masonry drain has been constructed from Abattoir Road, across the premises of the Sanitary Improvement Company in the Eastern area, for the suppression of a swamp formed by surface waters. In the Western area, the work of filling up hollows and depressions in the Crown Lands at Cassis with town sweepings was continued, while the construction of a system of channels has been commenced for the drainage of these lands in times of rain. The Woods and Forests Department have kindly afforded assistance in lopping or cutting the trees where free access to light and ventilation

were found necessary. The work is still being proceeded with.

8. As in previous years, cleaning operations were carried in certain streams with a view to give a free flow to the water and to prevent the development of mosquitoes.

9. Little permanent effect can, however, be expected from such undertakings until measures are adopted to ensure that these water courses are subsequently maintained in proper condition.

10. As a prophylactic measure principally, quinine was distributed free to the poor and at cost price to persons in a position to pay for it, from 27 depots situated in the most malarial regions of the Island. Although it must be admitted that greater advantage might have been taken of the facilities thus afforded them by the people for whom these depots are intended, yet the attempt deserves to be persevered in and the scheme at the same time given wider extension in the expectation of better results.

Legislation.

11. The following Ordinances dealing with matters of medical or sanitary interest were promulgated in 1905 viz : Nos. 3, 6, 16 and 37, the most important of which is Ordinance No. 16 which fixes the procedure to be followed for the detention and release of criminal lunatics.

L. G. BARBEAU,
M.B.C.M. EDIN., D.P.H. LOND.
Acting Director,
Medical & Health Dept.

August 28th. 1906.

ANNEXURE I.

(a)

RETURN OF THE STATISTICS OF POPULATION FOR THE YEAR 1905.

			Europeans, Whites, Mixed & Coloured.	Africans.	Indians.	Chinese.	Total.
Number of inhabitants on 31.12.1904	...		105467	2418	265277	5583	378,745
„ Births during the year 1905	...		3944	...	10099	...	14,043
„ Deaths „ „ 1905	...		4231	21	10961	166	15,379
„ Immigrants „ „ 1905	...		1795	...	2247	936	4,978
„ Emigrants „ „ 1905	...		2029	...	1995	831	4,855
Number of inhabitants on 31.12.1905	...		104946	2397	264667	5522	377,532
Increase or	...	...	...	...	...	...	...
Decrease	...	...	521	21	610	61	1,213

(b)

METEOROLOGICAL RETURN FOR THE YEAR 1905.

MONTHS.	TEMPERATURE.						RAIN-FALL.	WINDS.		REMARKS.
	Solar Maximum.*	Minimum on Grass.*	Shade Maximum.*	Shade Minimum.*	Range.	Mean.		Amount in inches.	Degree of Humidity.	
January ...	156.4	67.7	88.5	71.0	17.5	78.7	21.090	84.8	N.E.b.E.	8.0 Miles per hour.
February ...	152.4	64.8	87.5	69.5	18.0	78.9	3.235	80.0	E.b.S.	7.9
March ...	153.2	59.0	86.7	64.7	22.0	77.2	14.975	84.9	E.S.E.	8.8
April ...	147.6	57.0	84.4	65.7	18.7	75.3	1.985	80.8	E.S.E.	10.7
May ...	140.2	52.0	81.7	60.6	21.1	71.9	3.350	81.2	E.S.E.	9.6
June ...	141.9	45.1	78.7	53.0	25.7	68.9	2.665	79.6	E.S.E.	8.4
July ...	139.8	47.5	79.1	56.5	22.6	68.6	1.625	76.6	S.E.b.E.	9.6
August ...	140.8	44.9	78.5	52.3	26.2	67.7	2.350	73.9	S.E.b.E.	9.8
September ...	145.8	42.7	81.2	53.2	28.0	70.1	1.995	76.3	East	7.6
October ...	150.0	51.2	85.1	59.1	26.0	72.8	1.995	72.0	E.b.S.	9.3
November ...	149.7	53.1	89.0	60.5	28.5	74.6	4.090	74.2	East	9.3
December ...	153.5	54.1	87.8	62.6	25.2	77.2	8.550	77.8	E.b.N.	8.0
For the year ...	156.4	42.7	89.0	52.3	28.5	73.5	67.905	78.5	E.b.S.	8.9
	Jan. 16	Sep. 2	Nov. 17	Aug. 2	Nov.					

RETURN OF DISEASES AND DEATHS.

PUBLIC HOSPITALS :—

1. Civil Hospital.
 2. Port Louis Prisons Hospital.
 3. Long Mountain.
 4. Poudre d'Or.
 5. Flacq.
 6. Mahébourg.
 7. Souillac.
 8. Barkly Asylum.
 9. Lunatic Asylum.
 10. Beau Bassin Prisons.
 11. Reformatory.
 12. Moka.
-

GENERAL DISEASES.

Diseases.	*Remaining at end of 1904.	Yearly Total.		Total cases treated.	Remain- ing at end of 1905.	Remarks.
		Ad- missions.	Deaths.			
Small Pox	...	2	...	2	...	
Chicken Pox	...	6	...	6	...	
Measles	...	...	...	...	...
Scarlet Fever	...	...	...	...	...
Dengue	...	...	...	...	...
Cholera	...	...	...	...	...
Yellow Fever	...	...	...	...	...
Beriberi	...	20	7	20	...	
Yaws	...	...	...	...	...
Influenza	9	1,039	42	1,048	6	
Diphtheria	...	3	2	3	...	
Febricula	...	9	...	9	...	
Enteric Fever	1	8	3	9	...	
Dysentery	10	1,013	169	1,023	17	
Plague	...	32	11	32	...	
Malarial Fever :—						
(a) Intermittent	Quotidian	17	2,873	2,890	24	
	Tertian	2	211	213	3	
	Quartan	...	51	51	...	
	Irregular	...	121	121	3	
	Type undiagnosed...	5	1,584	1,589	6	
(b) Remittent	...	2	212	214	3	
(c) Pernicious	...	...	71	71	...	
Hæmoglobinuric Fever	...	7	2	7	...	
Erysipelas	5	66	10	71	7	
Pyæmia	...	6	5	6	...	
Septicæmia	...	10	5	10	...	
Tetanus	1	7	6	8	...	
Tubercle	22	1,008	227	1,030	53	
Gonorrhœa	4	182	...	186	4	
Hydrophobia	...	...	...	...	...
Scurvy	1	4	...	5	...	
Parotitis	...	2	...	2	1	
Carried over	79	8,547	580	8,626	127	

* i.e. the year previous to that for which the return is made.

Diseases.	Remaining at end of 1904.	Yearly Total.		Total cases treated.	Remain- ing at end of 1905.	Remarks.
		Ad- missions.	Deaths.			
Brought forward	79	8,547	580	8,626	127	
Pertussis	...	4	...	4	3	
Rheumatic Fever	...	19	...	19	1	
Rheumatism	16	458	3	474	9	
Gout	...	1	...	1	1	
Leprosy :—						
(a) Tubercular	...	4	...	4	...	
(b) Anaesthetic	...	5	...	5	...	
(c) Mixed	...	...	...	...	...
Syphilis :—						
(a) Inherited	...	11	3	11	...	
(b) Primary	4	87	...	91	1	
(c) Secundary	7	99	...	106	5	
(d) Tertiary	6	162	6	168	5	
Alcoholism	...	9	...	9	...	
Delirium Tremens	...	3	...	3	...	
Anæmia	19	389	20	408	9	
Debility	9	783	97	792	12	
Diabetes Mellitus	...	29	2	29	1	
Diabetes Insipidus	...	1	...	1	...	
New Growth: —						
(a) Non Malignant	3	50	...	53	1	
(b) Malignant	1	83	11	84	2	
Old Age	...	111	26	111	1	
Other Diseases	...	3	2	3	...	
Carried over	144	10,858	750	11,002	178	

Diseases.	Remaining at end of 1904.	Yearly Total.		Total cases treated.	Remain- ing at end of 1905.	Remarks.
		Ad- missions.	Deaths.			
Brought forward	144	10,858	750	11,002	178	
DISEASES OF THE NERVOUS SYSTEM:—						
Section 1:—						
Neuritis	...	11	...	11	...	
Meningitis	...	17	14	17	...	
Myelitis	...	18	...	18	1	
Locomotor Ataxia	...	12	...	12	1	
Hydrocephalus	...	...	...	...	...
Encephalitis	...	3	3	3	...	
Congestion of Brain	...	11	7	12	...	
Abcess of Brain	...	...	...	...	...
Cerebral Hæmorrhage	...	18	12	19	...	
Section 2:—						
Paralysis	2	57	...	59	3	
Epilepsy	1	102	4	103	3	
Chorea	...	4	...	4	1	
Neuralgia	...	71	...	71	...	
Torticollis	...	5	...	5	...	
Hysteria	...	12	...	12	...	
Neurasthenia	...	4	...	4	...	
Cephalalgia	...	3	...	3	...	
Eclampsia	...	2	1	2	...	
Dumbness	...	1	...	1	...	
Section 3:—						
Idiocy	1	6	...	7	...	
Mania	...	24	...	24	1	
Melancholia	...	1	...	1	...	
Dementia	...	5	...	5	...	
Delusional Insanity	...	7	...	7	1	
General Paralysis	...	...	...	...	...
Carried over	150	11,252	791	11,402	189	

Diseases.	Remaining at end of 1904.	Yearly Total.		Total cases treated.	Remain- ing at end of 1905.	Remarks.
		Ad- missions.	Deaths.			
Brought forward	150	11,252	791	11,402	189	
DISEASES OF THE EYE :—						
Conjunctivitis	2	39	...	41	3	
Keratitis	...	41	...	41	...	
Iritis	1	18	...	19	...	
Retinitis	...	4	...	4	1	
Cataract	4	105	...	109	4	
Ophthalmnia Tarsi	1	29	...	30	1	
Staphyloma	...	12	...	12	...	
Other Diseases	1	26	...	27	...	
DISEASES OF THE EAR :—						
Otitis	1	30	...	31	...	
Necrosis	...	8	...	8	...	
Abscess	...	8	...	8	...	
Otorrhœa	...	2	...	2	...	
DISEASES OF THE NOSE :—						
Epistaxis	...	4	...	4	...	
Rhinitis	...	5	...	5	...	
DISEASES OF THE CIRCULATORY SYSTEM :—						
Pericarditis	...	4	3	4	...	
Hypertrophy Cordis	...	10	1	10	...	
Valvular diseases:—						
(a) Aortic	2	61	12	63	3	
(b) Mitral	5	141	28	146	4	
Aneurysm	...	2	1	2	...	
Phlebitis	...	1	...	1	...	
Arterio Sclerosis	...	8	2	8	...	
Other Diseases	...	5	1	5	...	
Carried over	167	11,815	839	11,982	205	

LOCAL DISEASES.

LOCAL DISEASES.

Diseases.	Remaining at end of 1904.	Yearly Total.		Total cases treated.	Remaining at end of 1905.	Remarks.
		Admis- sions.	Deaths.			
Brought forward	... 167	11,815	839	11,982	205	
DISEASES OF THE RESPIRATORY SYSTEM:—						
Asthma	... 2	181	...	183	6	
Laryngitis	... ...	7	2	7	...	
Bronchitis	... 12	818	7	830	20	
Pneumonia	... 11	368	123	379	9	
Pleurisy	... 1	61	4	62	3	
Hœmoptysis	... ...	4	...	4	...	
Other Diseases.	... ...	22	12	22	...	
DISEASES OF THE DIGESTIVE SYSTEM:—						
Stomatitis	8	34	1	42	...	
Tonsillitis	... ...	19	...	19	1	
Dyspepsia	4	129	...	133	...	
Gastritis	... ...	60	...	60	3	
Gastralgia	... ...	26	...	26	1	
Ulcus Ventriculi	... ...	5	3	5	...	
Enteritis	3	266	32	269	3	
Appendicitis	... ...	3	...	3	1	
Hernia	... ...	37	...	37	1	
Hæmorrhoids	... ...	85	...	85	3	
Fistula in Ano	... ...	32	...	32	2	
Hepatitis	... ...	62	...	62	1	
Cirrhosis of Liver	3	83	19	86	2	
Suppuration of Liver	1	26	8	27	3	
Biliary Calculus	... ...	11	...	11	2	
Peritonitis	... ...	11	7	11	...	
Diarrhœa	16	508	36	524	10	
Colic	... ...	50	...	50	...	
Constipation	1	22	...	23	...	
Carried over	229	14,745	1,093	14,974	276	

Diseases.	Remaining at end of 1904.	Yearly Total.		Total cases treated.	Remaining at end of 1905.	Remarks.
		Admis- sions.	Deaths.			
Brought forward	229	14,745	1,093	14,974	276	
DISEASES OF THE DIGESTIVE SYSTEM :—						
Contd.						
Other Diseases	...	4	78	6	82	3
DISEASES OF THE LYMPHATIC SYSTEM :—						
Splenitis	...	...	12	...	12	...
Hypertrophy Splenis	13	657	30	670	18	
Adenitis	1	112	...	113	3	
Lymphangitis	1	39	1	40	3	
Lymphangiectasis	...	...	...	...	...
Goitre	...	...	1	...	1	...
DISEASES OF THE URINARY SYSTEM :—						
Nephritis	9	325	72	334	10	
Pyelitis	...	1	...	1	...	
Cystitis	2	83	5	85	2	
Calculus	...	9	...	9	...	
Other Diseases	...	13	1	13	...	
Carried over	259	16,075	1,208	16,334	315	

Diseases.	Remaining at end of 1904.	Yearly Total.		Total cases treated.	Remain- ing at end of 1905.	Remarks.
		Ad- missions.	Deaths.			
Brought forward	259	16,075	1,208	16,334	315	
DISEASES OF THE GENERATIVE SYSTEM :-						
(a) <i>Male organs.</i>						
Balanitis	...	7	...	7	2	
Phimosis	...	13	...	13	...	
Paraphimosis	...	14	...	14	...	
Stricture of Urethra	...	47	...	47	1	
Prostatitis	...	7	...	7	...	
Ulcus Veneris Molle	2	55	...	57	4	
Hydrocele	...	93	...	93	...	
Orchitis	...	64	...	64	1	
Other diseases	1	59	...	60	5	
(b) <i>Female organs.</i>						
Oöphoritis	...	2	...	2	...	
Metritis	1	20	...	21	1	
Parametritis	...	7	...	7	...	
Endometritis	...	8	...	8	...	
Displacement of Uterus	...	13	...	13	...	
Vaginitis	...	11	...	11	...	
Amenorrhœa	...	7	...	7	...	
Dysmenorrhœa	...	2	...	2	1	
Menorrhagia	...	11	...	11	...	
Metrorrhagia	...	9	...	9	...	
Leucorrhœa	...	13	...	13	1	
Mastitis	1	7	...	8	...	
Abscess of Breast	...	12	...	12	...	
Other diseases	1	8	...	9	...	
Carried over	265	16,564	1,208	16,829	331	

LOCAL DISEASES.	Diseases.	Remaining at end of 1904.	Yearly Total.		Total cases treated.	Remaining at end of 1905.	Remarks.
			Admissions.	Deaths.			
	Brought forward	265	16,564	1,208	16,829	331	
AFFECTIONS CONNECTED WITH PREGNANCY :—							
	Abortion	...	8	...	8	...	
	Hæmorrhage	...	...	...	...	...
	Other affections	...	2	...	2	...	
AFFECTIONS CONNECTED WITH PARTURITION :—							
	Inertia	...	...	...	...	...
	Dystocia	...	...	...	...	...
	Post partum Haemorrhage	...	1	...	1	1	
	Pelvic Cellulitis	...	1	...	1	1	
	Other affections	...	11	6	11	...	
DISEASES OF THE ORGANS OF LOCOMOTION :—							
	Osteitis	...	2	18	20	...	
	Periostitis	...	...	13	13	...	
	Caries	...	1	16	17	2	
	Necrosis	...	2	12	14	...	
	Synovitis	...	...	10	10	...	
	Arthritis	...	3	40	43	2	
	Ankylosis	...	...	1	1	...	
	Ganglion	...	...	...	...	...
	Other diseases	...	37	1	37	1	
	Carried over	273	16,734	1,218	17,007	338	

Diseases.	Remaining at end of 1904.	Yearly Total.		Total cases treated.	Remaining at end of 1905.	Remarks.
		Admissions.	Deaths.			
Brought forward ...	273	16,734	1,218	17,007	338	
DISEASES OF THE CELLULAR TISSUE :						
Cellulitis and Abscess ...	21	612	4	633	30	
Gangrene	3	42	16	45	4	
Sinus ....	...	6	...	6	1	
DISEASES OF THE SKIN :						
Erythema	...	3	...	3	...	
Eczema	3	157	...	160	6	
Impetigo	9	194	...	203	5	
Psoriasis	...	8	...	8	...	
Herpes	...	3	...	3	...	
Zona	...	2	...	2	...	
Pemphigus	...	3	...	3	...	
Carbuncle	1	21	...	22	2	
Furunculus	...	20	...	20	1	
Paronychia	1	14	...	15	...	
Lupus	...	1	...	1	...	
Ulcus	8	337	...	345	19	
Ecthyma	...	81	...	81	2	
Phagedænic Ulcers	7	223	...	230	3	
Other Diseases	...	34	...	34	2	
Carried over ...	326	18,495	1,238	18,821	413	

Diseases.	Remaining at end of 1904.	Yearly Total.		Total cases treated.	Remain- ing at end of 1905.	Remarks.
		Ad- missions.	Deaths.			
Brought forward ...	326	18,495	1,238	18,821	413	
INJURIES:—						
(a) <i>General</i> :						
Burns	...	1	19	10	20	...
Lightning Stroke	...	...	...	...	...	...
Asphyxia	...	...	1	1	1	...
Shock from :—						
Starvation	...	...	1	...	1	...
(b) <i>Local</i> :—						
Burns & Scalds	...	2	24	3	26	...
Bruise	...	5	281	...	286	5
Wound	...	15	497	3	512	25
Sprain	...	...	17	...	17	...
Dislocation of :—						
Shoulder	...	...	5	...	5	...
Elbow	...	...	4	...	4	...
Wrist	...	...	1	...	1	...
Thumb	...	...	1	...	1	...
Hip	...	...	4	..	4	...
Femur	...	...	1	...	1	...
Fractures	...	13	133	7	146	8
Gunshot Wound	...	...	13	...	13	2
Other Injuries	...	...	16	...	16	...
Carried over	362	19,513	1,262	19,875	453	

Diseases.	Remaining at end of 1904.	Yearly Total.		Total cases treated.	Remain- ing at end of 1905.	Remarks.
		Ad- missions.	Deaths.			
Brought forward	362	19,513	1,262	19,875	453	
MALFORMATIONS :—						
Head	...	1	...	1	...	
Thorax	...	2	...	2	...	
Abdomen	...	...	...	...	...
Upper Limb	...	...	...	...	...
Lower Limb	...	1	...	1	...	
POISONS :—						
Mineral	...	2	...	2	...	
Vegetable	...	1	...	1	...	
Animal	...	2	1	2	...	
Non Metal	...	3	...	3	...	
PARASITES :—						
Tape Worms	...	...	...	...	...
Round Worms	1	84	...	85	...	
Thread Worms	...	12	...	12	...	
Bilharzia Hœmatobia	...	16	...	16	...	
Filariasis :—						
Elephantiasis	...	24	1	24	2	
Chyluria	...	8	...	8	...	
Ankylostoma	1	47	2	48	2	
Itch	4	331	...	335	4	
Other Parasites	...	8	...	8	...	
Not specified*	19	585	1	604	8	
Parturition (<i>Uncomplicated</i>).	1	95	...	96	3	
Total	388	20,735	1,267	21,123	472	

* Includes mothers admitted with their sick children and vice versa, malingering, &c.

SUMMARY.

Diseases.	Remaining at end of 1904.	Admis- sions.	Total cases treated.	Remaining at end of 1905.	Remarks.
General Diseases	144	10,858	11,002	178	
Diseases of the Nervous System	6	394	400	11	
,, Eye	9	274	283	9	
,, Ear	1	48	49	...	
,, Nose	...	9	9	...	
,, Circulatory System	7	232	239	7	
,, Respiratory System	26	1,461	1,487	38	
,, Digestive System	40	1,547	1,587	36	
,, Lymphatic System	15	821	836	24	
,, Urinary System	11	431	442	12	
,, Generative System	6	489	495	16	
Affections connected with Pregnancy and Parturition	...	23	23	2	
Diseases of the Organs of Locomotion	8	147	155	5	
,, Cellular Tissue	24	660	684	35	
,, Skin	29	1,101	1,130	40	
Injuries	36	1,018	1,054	40	
Malformations	...	4	4	...	
Parasites	6	530	536	8	
Poisons	...	8	8	...	
Not specified	19	585	604	8	
Parturition (<i>Uncomplicated.</i>)	1	95	96	3	
Total	388	20,735	21,123	472	

Return of Births.

		Number.	Deaths.	Remarks.
Born alive at term	...	83	1	
Prematurely born	...	19	18	
Still born	...	11		
Total	...	113	30	

RETURN OF SURGICAL OPERATIONS.

Operations.	Number.	Deaths.	Remarks.
Operations for Tumours	30	1	
,, Evacuation of Abscesses	612	11	
,, Removal of Foreign Bodies	17	...	
Operations on Blood vessels	1	...	
,, Lymphatic Glands	11	1	
,, Skin and Subcutaneous Tissues	59	1	
,, Bones	47	...	
,, Nerves	...	...
,, Joints	41	1	
,, Muscles and Tendons	3	1	
,, Skull and Brain	2	1	
,, Eye	87	...	
,, Ear	5	...	
,, Head and Face	49	...	
,, Chest	16	2	
,, Abdominal Cavity	102	7	
,, Liver	24	6	
,, Spleen	1	...	
,, Rectum and anus	40	...	
,, Urinary System	77	2	
,, Male Generative Organs	170	...	
,, Female Generative Organs	18	...	
Amputations	44	7	
Obstetric Operations	5	2	
Other Operations	27	...	
Total	1,488	43	

L. G. BARBEAU,
Acting Director, Medical & Health Department.

General Return of Mental Diseases, Admissions and Deaths in the Lunatic Asylum.

Diseases.	Remaining on 31.12.04.	Admis- sions.	Deaths.	Total cases treated.	Remaining on 31.12.05.		
Idiocy	9	7	2	16	10
Mania	207	78	18	285	209*
Melancholia	25	19	1	44	32
Dementia	121	5	6	126	117
Delusional Insanity	51	1	9	52	43
Total	...	413	110	36	523	411	
Admitted on interim order, but found sane by the Commissioners in Lunacy	...	1	6	...	7	...	
Grand Total	...	414	116	36	530	411	

* Exclusive of one Chinaman absconded and not yet recaptured.

L. G. BARBEAU,
Acting Director, Medical and Health Department.

ANNEXURE III

SANITARY WORK

PERFORMED IN PORT LOUIS

1905.



STATEMENT OF DUTIES PERFORMED BY SANITARY

Sections.	Private Premises.	Shops.	Lodging Houses.	Livery Stables.	Government Establishments.	Public Latrines.	Cemeteries.	Slaughter Houses.	Tanneries.	Indore Establishments.	Gratuitous Latrines.	Bake-Houses.	Lime-Kilns.	Streams.	Camps.	Lavatories.	Cowsheds.	Engrais Chimiques Establishments.	Special Em- quires.	Cremations.	
No. 1	2,272	201	6	279	100	69	30	10	39	78	199	...	20	9	39	161	...	125	16	1	
„ 2	900	110	5	150	99	50	...	10	...	...	...	6	...	11	4	...	3	98	15	1
„ 3	1,669	27	...	167	12	22	...	...	...	...	...	5	...	24	...	...	...	74	29	...
„ 4	2,123	164	25	561	64	25	...	...	...	...	...	48	...	39	9	...	...	165	68	...
„ 5	1,757	276	7	194	149	222	...	...	...	...	...	17	...	32	...	...	...	11	178	...
„ 6	1,690	113	9	131	89	72	32	...	47	27	...	6	...	115	38	2
„ 7	1,381	39	...	62	...	57	...	...	...	...	...	...	...	29	...	123	...	66	40	1
„ 8	1,051	79	13	133	103	57	23	...	...	...	...	310	21	25	...	12	...	164	180	2
Total...	13,143	1,009	65	1,677	616	574	53	20	39	78	199	111	30	212	104	...	323	3	818	514	7

CONTRA-

Sections.	Art. 41 of Ord. 32 of 1894-95.			Art. 29 of Ord. 32 of 1894-95.			Regulations 220 of 1884.			Regulation 137 of 1882.		
	No.	Abated.	Abey- ance.	No.	Abated.	Abey- ance.	No.	Abated.	Abey- ance.	No.	Abated.	Abey- ance.
No. 1	10	10	...	278	231	47	67	66	1	48	48	...
„ 2	...	...	...	260	257	3	...	...	...	22	22	...
„ 3	...	...	...	321	300	21	91	90	1	59	58	1
„ 4	...	...	...	190	172	18	8	8	...	81	81	...
„ 5	4	4	...	172	162	10	13	13	...	44	44	...
„ 6	2	2	...	192	172	20	62	56	6	70	70	...
„ 7	...	...	...	141	120	21	108	96	12	26	19	7
„ 8	...	...	...	170	148	22	45	36	9	61	56	5
Total ...	16	16	...	1,724	1,562	162	394	365	29	411	398	13

INSPECTORS, PORT LOUIS, FOR THE YEAR 1905.

Dhobies.	Quarantine duties.	Pig-Styes.	Public Fountains.	Convents.	Gully Holes.	Markets.	Factories.	Lighters.	Sale of Meat.	Attendances at sales.	Night Soil Sidings.	Exhumations.	Morgue.	Waste Lands.	Scavenging.	Notices served.	Attendances in Court.	Control of Public Nuisances.	Examination of Milk.	Service of Notices.	Shores & Docks.	Orders served.	
2	14	5	12	5	5	...	12	...	...	...	...	...	...	...	68	59	51	217	200	13	1		
10	16	...	5	3	5	15	...	...	...	...	70	282	...	100	105	105	250	11	58	...	...
4	22	...	8	...	9	...	2	...	...	...	...	363	69	403	151	151	258	17	34	170	...	50	
105	4	...	...	...	113	...	10	243	79	...	...	...	...	...	113	69	150	135	17	34	170	...	
5	...	...	...	...	243	...	...	568	6	...	...	...	...	...	69	498	49	150	135	17	34	170	...
47	7	...	168	12	325	...	...	9	...	...	...	...	...	...	253	229	55	377	209	58	1	127	...
...	15½	237	...	22	...	...	9	...	...	...	...	...	...	...	490	203	33	390	363	58	28	28	...
9	10	45	...	7	931	...	...	...	...	...	...	...	...	...	69	287	49	150	131	211	...	17	...
182	88½	287	193	15	486	264	64	811	259	44	...	8	2	35	1,510	2,039	382	1,721	1,404	1,194	90	519	...

VENTIONS.

No.	Public Nuisances.		Regulation 148 of 1878.	Regulation 192 of 1882.	Regulation 63 of 1875.	Regulation 134 of 1883.	Regulation 67 of 1885.	Ordinance 39 of 1881.	Amount of Fines.		Regulation 25 of 1900.	Ordinance 21 of 1900.	Regulation 213 of 1905.	Ordinance 9 of 1889.	Scavenging.	Notices served.	Attendances in Court.	Control of Public Nuisances.	Examination of Milk.	Service of Notices.	Shores & Docks.	Orders served.		
	Abated.	Abey-ance.							Rs.	Rs.														
70	60	10	6	73	...	...	2	2	337	...	...	1	8	3	...	...	59	51	217	200	13	1		
60	30	30	...	3	...	...	...	...	52	...	...	8	2	35	1,510	2,039	382	1,721	1,404	1,194	90	519		
137	83	54	...	3	...	...	2	2	205	...	...	31	7	...	...	...	...	100	105	105	250	11	58	
83	70	13	1	...	...	...	...	...	370	50	...	1	1	3	...	...	...	...	151	151	258	17	34	170
165	137	28	...	1	...	...	1	...	516	50	...	7	...	2	...	...	...	377	209	58	1	127	...	
171	110	61	1	1	...	...	...	...	333	...	...	...	...	...	...	...	...	...	131	211	...	17	...	...
69	60	9	...	35	...	...	...	17	86	...	...	1	1	3	...	...	...	100	93	142	13	68	...	
57	29	28	...	41	...	...	...	...	340	...	...	3	...	...	...	378	177	68	...	...	...	...	...	...
812	579	233	8	156	...	...	7	17	2,240	...	...	51	2	3	...	...	...	...	...	...	...	...	...	...

F. J. R. MOMPLÉ,
Acting Assistant Director.

ANNEXURE IV

SANITARY WORK

PERFORMED IN THE RURAL DISTRICTS

1905.



Medical & Health

STATEMENT OF ALL SANITARY CONTRAVENTIONS,

Sections.	No. of	CONTRAVENTIONS.			NOTICES SERVED.													
		No. of cases in which parties were warned and articles seized and destroyed.	No. of parties prosecuted.	Amount of Fines. Rs. | c.	Under Regn. 96 of 1877.	Regn. 185 of 1879.	Regn. 79 of 1883.	Regn. 162 of 1885.	Regn. 234 of 1889.	Regn. 263 of 1893.	Ord. 32 of 1894-95.	Regn. 130 of 1898.	Regn. 177 of 1883.	Ord. 21 of 1900.	Ord. 25 of 1900.	Regn. 79 of 1882.	Regn. 65 of 1903.	Regn. 18 of 1896.	Regn. 10 of 1889.	Ord. 12 of 1878.
Pamplemousses—Lower	69	4	65	177 | ..	..	45	..	132	..	..	..	..	..	..	..	..	..	..
" —Upper	67	2	65	162 | 25	..	15	..	142	..	279	37	..	..	..	..	..	..	..
Rivière du Rempart	103	11	92	406 | 75	..	21	..	28	..	110	..	..	..	..	..	..	..	..
Flacq—Northern	143	8	135	373 | 10	..	..	..	156	2 | 1	234	..	..	..	..	..	..	..	2
" —Southern	40	8	32	102 | 75	5	13	..	106	23 | 15	84	1	..	..	..	..	..	..	3
Rose Belle	61	3	58	323 | 50	..	..	..	160	..	253	..	1	2	..	..	7	..	..
Grand Port...	240	4	236	742 | 10	..	1	..	162	9 | 158	355	47	..	..	..	..	3	..	..
Savanne	242	6	236	1006 | 80	4	99	..	293	22 | ..	298	..	1	4	..	..	20	..	..
Black River	134	2	132	121 | 32	..	26	..	142	18 | ..	126	..	..	..	..	..	21	..	..
Curepipe	128	6	122	477 | 03	..	..	..	..	..	695	62 | 446	2	5	..	..	..	..	..
Vacoas	16	2	14	101 | ..	..	..	..	108	2 | ..	136	..	..	..	1	44	..	..	..
Quatre Bornes	49	..	49	194 | ..	..	..	..	138	.. | ..	205	..	..	..	..	13	..	..	..
Plaines Wilhems, Lower	80	2	78	308 | ..	..	..	..	472	.. | ..	687	..	15	..	24	..	..	..	..
Moka	55	..	55	426 | ..	1	13	7	266	59 | ..	346	..	..	..	..	..	..	..	..
Total	1427	58	1369	4921 | 60	10	188	7	2218	135 | 174	3940	147 | 447	20	5	8	111	3	20	5

Sections.	Regn. 63 of 1875.	DETAILS OF															
		Regn. 107 of 1876.	Regn. 96 of 1877.	Regn. 97 of 1877.	Ordce. 12 of 1878.	Regn. 148 of 1878.	Regn. 185 of 1879.	Regn. 134 of 1883.	Regn. 162 of 1885.	Ordce. 9 of 1889.	Ordce. 67 of 1885.	Regn. 234 of 1889.	Regn. 332 of 1891.	Regn. 189 of 1892.	Regn. 263 of 1893.		
Pamplemousses—Lower	..	..	..	..	..	..	2	1	17	3	8	..	..	..	..
" —Upper	..	..	..	..	..	14	..	10	12	..	3	4	..	..	..
Rivière du Rempart	..	..	..	..	..	62	2	11	1	4	..	3	..	..	..
Flacq—Northern	3	..	4	..	..	46	..	50	2	16	..	..	..	..	..
" —Southern	1	..	3	2	..	..	..	8	..	1	1	..	..	..	..
Rose Belle	..	..	..	..	..	5	1	12	1	..	..	..	..	..	..	..
Grand Port...	6	..	1	..	..	16	..	70	..	50	..	..	..	..	..	..
Savanne	9	..	..	2	..	..	..	69	..	74	..	..	..	..	..	..
Black River	..	..	1	..	..	35	..	4	..	59	..	..	..	..	..	..
Curepipe	7	..	..	..	..	..	..	..	9	..	3	..	..	..	..	..
Vacoas	2	..	..	..	..	..	..	..	3	..	..	..	..	..	..	..
Quatre Bornes	1	2	27	3
Plaines Wilhems—Lower	5	4	..	2	5	1	15	10	5
Moka	8	2	..	4	..	11	..	5	12
Total	41	10	8	2	184	11	240	14	288	22	45	48	68	23

DISTRICTS.

Department.

COLLECTIONS, &c., FOR THE YEAR 1905.

Complied with.	Not complied with.		ABATTOIRS.		CEMETERIES.		MARKETS.		REMARKS.												
	No. of parties prosecuted for non compliance with.		Amount of Fines.	No. of Private.	No. of Public.	No. of animals killed in each Public Abattoir.		No. of Private.	No. of Public.												
						Oxen.	Cows.	Calves.	Swine.												
	Rs.	c.																			
150	31	31	61	...	1	...	...	8	1	3248	6250	...	...	...	...	...	...	...	...
446	16	16	28	...	1	30	2	21	3	...	...	...	...	1	135	60	...	...	...	...
140	19	11	40	75	...	...	...	...	...	15	3	581	1133	...	...	...	...	...	...	...
368	17	17	61	75	2	...	...	...	...	14	3	201	170	...	...	...	...	...	...	...
246	9	9	15	75	...	...	...	...	...	3	2	913	1802	...	...	...	...	...	...	...
398	25	25	177	50	2	...	...	...	...	5	1	890	1788	...	...	...	...	...	...	...
650	85	83	141	05	1	85	89	55	114	6	2	590	1034	50	1	1522	55	Abattoir fees Rs. 792.00—Misc : Rs. 4			
517	224	224	841	55	2	1	26	81	112	37	3	4	3	1175	2734	50	...	...	...	568.50
277	56	36	28	70	...	...	...	...	...	6	3	468	810	...	...	...	...	...	...	...
1078	132	46	94	12	1	...	...	...	...	...	...	*1	...	...	...	1	2248	40	* Closed.	
240	6	6	35	...	1	...	...	...	...	2	1	802	1850	50	...	...	...	...	...	...
349	7	7	42	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...
1197	1	1	5	...	1	1	1335	261	274	380	626	10	1	+2	646	664	50	2	1448	70	† 1 closed.
296	50	50	131	25	1	...	...	...	...	7	2	994	1598	...	...	...	...	...	...	...
6352	678	562	1703	42	10	4	1476	433	462	497	663	13	72	24	10508	19845	...	5	5355	25	

CONTRAVENTIONS.

Ordece. 32 of 1894-95.	Regn. 25 of 1900.	Ordece. 8 of 1898.	Regn. 155 of 1904.	Regn. 434 of 1890.	Ordece. 10 of 1889.	Regn. 79 of 1882.	Regn. 32 of 1872.	Regn. 163 of 1885.	Ordece. 47 of 1898.	Regn. 65 of 1903.	Regn. 68 of 1876.	Regn. 67 of 1885.	Ordece. 21 of 1900.	Regn. 180 of 1904.	Regn. 67 of 1883.	Regn. 177 of 1883.	Regn. 35 of 1905.	Regn. 35 of 1863.	Total amount of Fines.		
																			Rs.	c.	
13	...	...	...	...	...	...	...	18	...	...	...	...	...	...	...	...	...	...	...	177	...
16	...	...	...	...	...	...	...	6	...	1	...	2	1	...	...	...	...	...	...	162	25
14	...	...	...	...	...	...	...	3	...	1	...	7	1	...	...	...	...	...	...	406	75
7	...	...	...	...	...	...	...	1	...	1	...	3	1	...	...	...	...	...	...	373	10
6	...	...	...	...	...	...	...	10	...	1	...	2	1	...	...	...	...	...	...	102	75
22	...	...	...	...	...	...	...	3	...	1	...	7	1	...	...	...	...	...	...	323	50
47	...	...	...	...	...	...	...	6	...	1	...	1	1	...	...	...	...	...	...	742	10
77	...	...	...	...	...	...	...	1	...	2	...	3	1	...	...	...	...	...	...	1006	80
25	...	...	...	...	...	...	...	1	...	1	...	1	1	...	...	...	...	...	...	121	32
5	...	...	...	...	...	...	...	10	...	2	...	3	2	...	...	...	...	...	...	477	03
7	4	3	3	...	...	...	...	...	...	3	...	3	1	...	...	...	...	...	...	101	...
239	4	3	5	43	12	1	1	8	10	2	2	2	3	6	58	2	3	4	4,921	60	194
																				308	...
																				426	...

F.J.R. MOMPLÉ,
Acting Assistant Director.

ANNEXURE V.

**Annual Report on the Civil Hospital for the
year 1905.**

1. The number of admissions to the Civil Hospital in 1905 is the highest on record for the last fifteen years. As will be pointed out further on, this result is attributable to the increased prevalence of malaria this year.

The following table gives the admissions and deaths for the last ten years.

TABLE I.

Years.	Admissions.	Deaths.
1896	5117	372
1897	5039	320
1898	5658	356
1899	5230	418
1900	5260	410
1901	5554	509
1902	6092	423
1903	6062	520
1904	5573	379
1905	6225	457

2. Table II gives the number of European, Creole and Asiatic patients admitted in 1905, as compared with the two preceding years.

TABLE II.

Nationalities.	1903.	1904.	1905.
Europeans	124	149	113
Creoles	3587	3710	4121
Asiatics	2351	1714	1991
Total	6062	5573	6225

There was a marked decrease in the number of European patients who as a rule consist of sailors belonging to ships in the harbour.

3. Table III classifies the admissions according to their respective designations and the districts from which they came.

TABLE III.

Districts.	Paupers.	Private Patients.	Police Force.	Prison Warders.	Police Cases.	Port Department.	Non-paying Patients.	Total.	Deaths.
Port Louis..	3614	796	492	34	300	51	507	5794	389
Pample-mousses.	124	2	9	...	...	...	...	135	39
Rivière du Rempart.	2	...	8	...	...	...	...	10	2
Flacq	...	...	24	...	...	...	...	24	6
Moka	64	1	8	...	...	...	...	73	10
Plaines									
Wilhems.	5	4	88	21	...	...	...	118	4
Grand Port..	...	...	7	...	...	...	...	7	2
Savanne	...	8	36	...	...	...	...	44	2
Black River.	...	1	18	...	1	...	...	20	3
Total	3809	812	690	55	301	51	507	6225	457

There were 5794 admissions from Port Louis with 389 deaths, and 431 admissions from the Country Districts with 68 deaths, the death rates being respectively 6.5 per cent for the Town patients and 16 per cent for those coming from the country. This enormous difference is due to the fact that, as usual, a large number of patients from the rural districts are received in this hospital almost in a dying state.

4. The total number of patients treated was 6,351 of whom 4,760 were males and 1,591 were females.

The daily average number in hospital was much higher than the three preceding years, as can be seen from the following table.

TABLE IV.

Years.	Daily average number in Hospital.		
	Males.	Females.	Total.
1903	139	60	199
1904	137	63	200
1905	160	67	227

The highest number in hospital in a day, viz: 263, was reached on the 11th. of March.

5. Table V is a summary of admissions, discharges and deaths in 1905.

TABLE V.

	Males.	Females	Total.
Number remaining at the end of 1904	84	42 126	6351
Number admitted in 1905	4676	1549 6225	
Total number treated	4760	1591	6351
Total number discharged	2473 1226 613	885 3358 406 1632 123 736	5726
Number died	322	135 457	6351
Remaining at the end of 1905	129	39 168	

Patients discharged without improvement consist of chronic and incurable cases and of patients who leave hospital at their own request and against the advice of the Medical Attendants, many to return, shortly after, worse than ever.

6. The rate of mortality was higher than last year, and yet lower than in 1903 as is shown in the following table.

TABLE VI.

Years.	Number of patients treated.	Number of Deaths.	Death-rate per cent of Patients.
1903	6237	520	8.3
1904	5715	379	6.6
1905	6351	457	7.2

124 patients received in a moribund condition, died in less than 72 hours after admission, viz:

TABLE VII.

Died within 24 hours.	Died between 24 and 48 hours.	Died between 48 and 72 hours.	Total No. died within 72 hours.
63	47	14	124

7. Table VIII shows the relative frequency and mortality of the most important diseases for the last three years.

TABLE VIII.

Diseases.	Cases.			Deaths.			Case mortality per cent.		
	1903	1904	1905	1903	1904	1905	1903	1904	1905
Malaria	942	813	1558	21	8	37	2.2	.98	2.3
Tuberculosis	502	543	481	129	112	94	25.8	20.6	19.5
Influenza	402	332	347	9	6	19	2.3	1.8	5.
Dysentery	244	154	228	44	40	56	21.5	23.5	24.5
Plague	72	47	30	20	20	9	27.7	42.5	30
Beriberi	100	16	20	33	3	7	5.3	18.7	35
Syphilis	131	149	163	5	1	2	3.8	1.3	1.2
Anæmia	243	170	152	3	2	3	1.2	1.17	2
Debility	213	151	174	72	54	35	34	36	20.1
Trop. Phagedæna	373	91	...	1	...	...	...	.26	...
Bronchitis	366	301	309	4	3	3	1.1	1	1.1
Pneumonia	194	95	131	55	21	46	29.3	22.1	35.8
Bright's disease	129	120	136	25	22	30	19.3	18.3	22
Rheumatism	265	190	146	1	...	1	.4	.53	.6
Injuries	345	323	356	5	7	15	1.1	2.1	4.2

The year under review was characterised by a considerable increase in the usual prevalence of malarial fever. There was on the other hand a marked reduction in the number of cases of tuberculosis. Syphilis and Bright's disease show an increase over the two preceding years. Fewer cases of plague came under our notice than in 1903 and 1904 and tropical sloughing phagedæna prevailed to a much less extent than last year.

8. The following is a comparative statement of the admissions and deaths during the four quarters of the year for the last three years.

TABLE IX.

	Admissions.			Deaths.		
	1903	1904	1905	1903	1904	1905
First quarter	1845	1493	2034	133	77	118
Second do.	1626	1547	1653	111	88	127
Third do.	1340	1375	1413	162	105	120
Fourth do.	1251	1158	1125	114	109	92
Total	6062	5573	6225	520	379	457

It results from the above figures that the morbidity was greatest in the first quarter and the mortality highest in the third.

9. Table X shows at a glance the comparative prevalence of the most important diseases in the different months of the year.

Months.	Malaria.	Hypertrophy of spleen.	Anæmia.	Debility.	Dysentery.	Rheumatism	Tuberculosis.	Influenza.	Bronchitis.	Pneumonia.	Plague.	Tropical Phagedæna.
January	106	10	20	17	7	20	66	...	39	5	3	12
February	245	12	18	17	28	10	33	...	56	13	3	20
March	407	14	15	22	42	16	40	...	49	6	...	18
April	244	17	12	20	47	9	37	11	30	9	...	9
May	153	13	10	23	19	14	23	33	19	6	...	13
June	97	7	10	16	17	14	19	42	8	5	1	6
July	65	5	11	16	10	7	32	74	15	16	2	1
August	37	2	8	11	12	10	57	82	25	17	1	2
September	47	4	14	13	14	15	40	58	9	18	...	5
October	63	3	16	10	4	11	53	20	15	8	9	1
November	38	6	6	1	12	12	34	19	11	7	8	4
December	47	6	9	8	14	6	31	8	24	16	3	...
Total	1549	99	149	174	226	144	465	347	300	126	30	91

By far the greatest number of admissions for malaria was obtained in March. February and April came next. Dysentery prevailed chiefly in March and April; influenza in June, July and August; pneumonia in July, August and September (winter months) and bronchitis, curiously enough, in the hot months of January, February and March. October and November are together answerable for 17 cases of plague out of a total of 30 received during the year. Tropical phagedæna which gave 78 cases in the first half of the year, accounted for only 13 cases in the second half so that the epidemic reported last year may now be considered as practically over.

10. *Malaria.*

TABLE XI.

Return of Malarial Fever.

	No. of Admissions.			No. of Deaths.		
	1903	1904	1905	1903	1904	1905
<i>Intermittent :—</i>						
Quotidian	293	312	708	...	...	3
Tertian	10	24	96	...	...	...
Quartan	4	4	23	...	...	...
Irregular	15	7	56	...	...	...
Type undiagnosed,	559	407	488	...	...	...
Remittent	51	48	130	16	5	6
Pernicious	10	5	48	5	3	28
	942	807	1549	21	8	37

The above figures show with sufficient eloquence the extent of the prevalence of malaria in 1905 as compared with the two preceding years. Indeed, this epidemic was, in respect of both number and severity, one of the worst I have had occasion to witness for many years past. No fewer than one-fourth of the patients admitted during the year suffered from malaria whilst the number of cases was nearly double that of 1904 and exceeded that of 1903 by more than 600.

Half of the cases were of the intermittent type. Of these, three attended by splenomegaly and advanced cachexia, ended fatally.

In one-third of the cases the type could not be ascertained, as only one attack was present and no examination of the blood could be made. These were the mildest cases we had.

A characteristic indication of the exceptional severity of this epidemic is the unusually high proportion of remittent and pernicious cases, as is shown in Table XI. Cases of the remittent type, though severe, were, as a rule, amenable to treatment and gave a relatively low mortality of 4.1 per cent. Out of 48 cases presenting a pernicious character, 28 died of whom 18 in less than 72 hours after admission. Delirium, coma, and hyperpyrexia were the chief complications met with. As already stated, the disease prevailed most in February, March and April. March alone accounts for one-fourth of the total number of admissions.

For reasons given in last year's report, it is not possible for us to examine malarial blood otherwise than in a restricted number of cases. In 1905, blood films were examined in 98 cases with the following results:—

Benign tertian parasites present in	53 cases
Malignant tertian	... 21 "
Double tertian	... 17 "
Quartan	... 3 "
Double quartan...	... 1 "
Mixed infection	... 3 ..
	—
	98

11. *Hæmoglobinuric Fever*.—This disease which is of extremely rare occurrence in the hospital practice of this Colony, is represented in this year's return by 5 cases. In three of these, the new treatment by hypodermic injections of 3 per cent saline solution as recommended by Le Boyé, Le Dantec and others was tried with very satisfactory results. One of the cases was under my care and two under that of Dr. Sinnatambou.

Case I (Dr. Sinnatambou's). Lo-Yen, Chinaman 24 years old, admitted on the 27th. of March with fever (temperature 37.6°) jaundice, vomiting and diarrhoea, he was suddenly seized with rigor followed by a rise of temperature to 40° centigrade and by the emission of a large quantity of characteristic "Black Water" urine. It was not possible to ascertain from the patient whether or not he had taken quinine before. Four hours after the first appearance of hæmoglobinuria, 500 grms. of a 3 per cent of saline solution were injected hypodermically. In the evening the temperature fell to 38.2°, and in the course of the night the urine ceased to be hæmoglobinuric and assumed a yellowish colour. The appearance of the patient on the morning of the 28th. showed considerable improvement. The temperature was 38.4° and the jaundice had disappeared. The urine passed during the day was perfectly normal and remained so till the patient's recovery.

The fever however persisted to the 8th. of April in spite of hypodermic injections of quinine and the administration of calomel and saline purgatives. On the 9th. of April convalescence began and the patient was discharged on the 9th. of May 1905 cured.

Case II (Dr. Rouget's). Rebecca Gordien, Creole girl, 12½ years old, residing at Nicolay Road, Port Louis, admitted on the 5th. of June suffering from influenza characterized by fever and catarrh of the medium sized bronchial tubes. Patient had on admission told the maid servant that she could not take quinine as she always passed blood each time she was given this drug before. Unfortunately this fact was not brought to my notice and quinine was included in the treatment prescribed.

On the 7th. at 2 p.m., about 4 hours after the third dose of quinine hydrobromate, patient was suddenly seized with rigor attended by pains in the loins.

The temperature rose to 40.3°, and at 3 p.m. she passed haemoglobinuric urine. At 4 p.m., she received an injection of 250 grms. of 3 per cent saline solution. At 8 p.m. the temperature was 40°, and there was distressing vomiting of bile.

June 8th, morning : Temperature 38.8° — There is marked jaundice, vomiting persisting, urine unchanged, calomel had been taken in the course of the night, and purgative lemonade administered early in the morning, 300 grms. of saline solution were injected at 9 a.m.

Noon : Temperature 40°, urine much improved, is now sherry-coloured.

300 grms. of saline solution injected at 4 p.m.

Evening : Temperature 39.2°, vomiting less. Urine passed after the third saline injection perfectly clear.

June 9th, morning : Temperature 38.6°, jaundice has disappeared and urine remains clear, but vomiting persists and the bronchial symptoms are much worse. There are signs of capillary bronchitis in both lungs. The pulse is extremely rapid, 150, and there is marked dyspnea.

The patient's condition grew rapidly worse in the course of the day, and she died on the morning of the 10th.

The points of interest in this case are :

1o. The setting in of haemoglobinuria after the administration of quinine.

2o. The rapid disappearance of haemoglobinuria and jaundice after the second injection of saline solution.

The ultimate cause of death was no doubt influenza which could not but be aggravated by the dangerous complications which so unexpectedly appeared on the scene.

Case III (Dr. Sinnatambou's). Ah-Hune, Chinaman, 21 years admitted on August 25th. with fever. (temperature 38.4°) jaundice, vomiting and haemoglobinuria. Pulse 120., spleen much enlarged. He had taken quinine after the appearance of blood in the urine, but not before, and there is no history of previous attacks.

On the morning of the 26th. the temperature was 39° the icterus was more marked, and the urine passed during the night was almost black. 500 grms. of saline solution were injected. Four hours after the temperature fell to 37.2° and the urine was orange coloured. In the evening a second injection of saline solution was made.

August 27th, morning : Jaundice less marked, urine malaga coloured, temperature 38° — Patient receives a third injection of 500 grms. of saline solution.

August 28th. The jaundice has almost completely disappeared and the urine is no longer haemoglobinuric, temperature 39° , hypodermic injections of quinine were then begun. From this date the patient's condition improved and on the 15th of September he was convalescent when he had a relapse, ushered in as before by rigor and pains in the loins. The temperature rose to 40° , and a few hours after haemoglobinuria set in. 500 grams of saline solution were at once injected.

September 16th. Urine of the previous night malaga coloured and that of the morning yellowish. 100 grams of saline solution prescribed to be administered every 4 hours per rectum. Internally cinchona and nux-vomica.

September 17th. Urine perfectly normal. Saline solution stopped. From this date haemoglobinuria never reappeared although the fever persisted more or less up to the 27th when convalescence began. The patient was discharged on the 28th. November as cured.

The examination of the blood for malarial and other parasites was made in cases I and III with negative results. The urine in case III was likewise microscopically examined and no red corpuscles were discovered.

In addition to the saline injections, calomel and saline purgatives were given. Bichlorhydrate of quinine was administered hypodermically in cases I and III.

Summary of the above obsevations.

	No of injections of 3 p.c. saline so- lution.	Results.
Case I	1	Urine became normal and jaundice disappeared in less than 24 hours after injection.
Case II	3	The 3 injections were made in the 24 hours. Haemoglobinuria ceased completely after the 3rd injection and jaundice disappeared 12 hours after.
Case III 1st. attack	3	First injection made 18 hours after admission ; 2nd injection made 10 hours after the 1st. ; 3rd injection made 14 hours after the 2nd. Urine became normal and jaundice disappeared after the 3rd injection.
2nd. attack	1	Injection was made immediately after the manifestation of haemoglobinuria which ceased in less than 24 hours. The jaundice was slight and rapidly disappeared.

In these 3 cases, haemoglobinuria and icterus disappeared in less than 36 hours after the commencement of the treatment. In two instances three injections were considered necessary. These injections however had no effect on the temperature which kept high in spite of the improvement in the haemoglobinuric symptoms.

12. *Dysentery*.—There were 77 cases more than last year and 22 less than in 1903. Patients suffering from this disease were, as usual, admitted in a very precarious state and 10 died in less than 72 hours after admission.

TABLE XII.

	Cases.			Deaths.		
	1903	1904	1905	1903	1904	1905
Acute Dysentery ...	138	67	133	5	1	8
Chronic Dysentery.	106	82	93	39	39	48
Total ...	244	149	226	44	40	56

The chronic cases gave a high mortality of more than 50 per cent, which is not surprising when it is remembered that Indian and Creole patients suffering from dysentery do not believe in a milk diet and only repair to hospital as a last resort.

The acute cases, although all of a severe nature, proved more amenable to treatment, the death-rate being 6 per cent.

13. *Small-Pox*.—During the short outbreak of small-pox in Town in the early months of the year, we had only one case in Hospital and that was in March. The patient, admitted with fever, showed the eruption a few days later. He was at once removed to the small-pox hospital. There were two cases of chicken-pox, viz : one in February and one in June.

14. *Plague*.—Plague was much less prevalent in 1905 than in the two preceding years. The total number of admissions was 30, as against 47 in 1904 and 71 in 1903. Nine of such patients, too weak to be removed to the Plague Hospital, died, of whom 6 in less than 48 hours. In some of these cases, the diagnosis was made after bacteriological examination of blood films after Ross' process. As already stated, the greatest number of admissions was made in October and November, vide Table X.

15. *Tuberculosis*.—The following table gives the various diseases returned under the name of tuberculosis.

TABLE XIII.

	Cases.	Deaths.
Pulmonary tuberculosis ...	438	81
Tubercular enteritis ...	8	5
Tuberculosis of bone ...	2	...
Tubercular arthritis ...	2	...
Tuberculosis of glands ...	15	8
	465	94

I am glad to record in 1905 a marked reduction in the number of cases of tuberculosis, as compared with the two preceding years. There were 481 admissions as against 502 in 1903, and 543 in 1904, while the rate of mortality which was 25.8 o/o and 20.6 o/o in 1903 and 1904 respectively, fell to 19.5 in 1905. In spite of this abatement, which appears to me to be purely accidental, tuberculosis still stands out as one of the prevailing diseases of Port Louis and as the one which accounts for the highest number of deaths. I am therefore more than ever in favour of the creation of a sanatorium for such cases, which in my opinion should not be systematically treated in a general hospital whatever may be the means of isolation and disinfection afforded.

16. *Enteric Fever* :—There were 3 cases of enteric fever, all confirmed by Widal's sero-reaction. One of the patients was a Chinaman who was admitted in a dangerous state at the end of the second week of the disease. He died 6 days after admission. In the second case, the patient had recovered from a first attack of three weeks' duration, and was rapidly convalescing when, in spite of repeated warnings, he ate solid food on the sly. A relapse ensued which carried him off in three days. The third case recovered.

17. *Syphilis*.—This disease reported last year to be steadily increasing, is still showing the same tendency as can be seen from the following table which gives the admissions of the last five years.

TABLE XIV.

Years.	Cases.
1901	85
1902	110
1903	128
1904	142
1905	154

The total number treated was 163, classified as follows:—

TABLE XV.

	Cases.	Deaths.
Inherited	1	...
Primary	53	...
Secondary	38	3
Tertiary	71	2
	163	5

18. *Beri-Beri*.—A few isolated cases, 20 in number, were admitted in the course of the year. In 14 of these cases the patients were Chinese, most of them new residents in the Colony. In 6, they were lascars, viz : 5 belonging to steamers in the harbour and one to the lightship. I have not as yet met with any case of *beri-beri* among the Creole inhabitants of the Town. Three of the patients died, of whom one in less than 24 hours after admission.

19. *Influenza* assumed this year a severer character than usual. A larger number of cases of capillary bronchitis and of catarrhal pneumonia than in the two previous years were met with. The mortality was necessarily higher, viz : 5 o/o as against 2.3 o/o in 1903 and 1.8 o/o in 1904.

TABLE XVI.

Return of Injuries.

Injuries.	Cases.	Deaths.	Remarks.
<i>General :</i>			
Burns	10	6	
Starvation	1	...	
<i>Local :</i>			
Burns and scalds	6	...	
Bruise	100	...	
Wounds	154	...	
Sprain	11	...	
<i>Dislocation of :</i>			
Hip	2	...	
Shoulder	2	...	
Elbow	1	...	
Wrist	1	...	
Thumb	1	...	
<i>Fracture of :</i>			
Femur	5	...	
Tibia	8	1*	* Died suddenly from embolism after compd. fracture of tibia.
Pelvis	1	1‡	‡ Railway accident. There was besides laceration of the rectum and perineum.
Patella	4	...	
Clavicle	3	...	
Humerus	6	...	
Radius (Colle's)	10	...	
Radius and ulna	3	...	
Phalanx	7	...	
Ribs	7	...	
Gunshot wound	6	...	
Concussion of Brain	1	...	
Foreign body in arm	1	...	
" " ear	1	...	
" " eye	2	...	
" " scalp	1	...	
" " oesophagus	1	...	
Total	356	8	

21. *Obstetrical return.*

There were 51 confinements as against 58 last year. They have been classified as follows:—

1. Premature delivery	...	...	11
2. Full term delivery:—			
a. Natural Labour L. O. A. presentation	...	38	
b. Dystocia—i. From breech presentation.	1		
ii. From placenta praevia	...	1	
			51

The return of births is as follows:—

TABLE XVII.

	Number.	Deaths.
Full term	36	...
Prematurely-born	12	12
Still-born	5	5
	53	17

There was one case of twin-birth at full term. Both children (males) lived and were discharged from hospital in a satisfactory state. There was besides a case of twins prematurely born. Both were females. One of the children was dead born, the other lived 2 days. Twenty-seven of the above children were males and 26 females. All the women who were delivered prematurely were suffering from one or other of the following diseases :— Tuberculosis, dysentery, Bright's disease anaemia and chronic malaria, and had been admitted in a very precarious state. Three of them died.

Only one of the children prematurely born was born dead. The others lived from a few hours to a few days. They were all very small and weakly and could not be expected to live.

In the 5 cases of still-birth, two of the women were admitted in actual labour after rupture of the membranes, one of them who had had a protracted labour, died of shock a few minutes after admission. In the other three cases the patients were suffering from longstanding and exhausting diseases, viz: chronic dysentery (1 case) anaemia and bronchitis (1 case), chronic malaria and influenza (1 case).

Another woman who had been admitted in a weak and anaemic state collapsed shortly after labour and died. The child, which was born alive, could be saved only after a good deal of trouble.

To sum up, out of the 51 women confined this year, only 28 were in good health, the others being in a more or less advanced state of disease. That accounts for the large number of premature and still-births recorded.

22. *Surgical Operations.*

532 Surgical operations were performed during the year as compared with 513 in 1904.

165 Operations were performed under chloroform

40 " " " with cocaine

78 " " " with chloride of ethyl

249 Minor operations " without anaesthetic.

RETURN OF SURGICAL OPERATIONS.

	Cases.	Deaths	Remarks.
1. REMOVAL OF TUMOURS :			
(a) <i>Non-Malignant</i> :—			
Fibroma	...	6	
Cyst of vulva	...	1	
Dentigerous cyst	...	2	
Lipoma	...	1	
(b) <i>Malignant</i> .			
Carcinoma of Breast	...	3	...
Epithelioma of skin	...	1	
2. Amputations:			
Thigh	...	6	3
Finger	...	5	
Thumb	...	1	
Toe	...	3	
3. Operations on Bones :			
(a) Excision of fragments of bones for Caries or Necrosis:—			
Ilium	...	1	
Femur	...	5	
Tibia	...	1	
Scapula	...	1	
Humerus	...	1	
Radius	...	1	
(b) Incision of Periosteum for suppurative Periostitis	...	3	
Carried over	...	42	3

	Cases.	Deaths	Remarks.
Bronght forward ...	42	3	
(c) Reduction of Fracture under Chloroform ;			
Radius and Ulna ...	1		
Colle's	1		
4. Operation on Joints :—			
Aspiration of knee	5		
Arthrotomy (with drainage)	8		
Partial excision of knee	1		
Reduction of dislocation :—			
Hip ...	2		
Shoulder	1		
Elbow	2		
Wrist	1		
5. Operations on Muscles and Tendons :—			
Excision of Tendo-Achilles ...	1	1	Died of arterio sclerosis and debility.
Incision for suppurative tendinitis ...	1		
Division of cicatricial adhesion	1		
6. Operations on the eye :—			
Scarification of conjunctiva ...	1		
Cataract ...	17		
Excision of the eye ball ...	2		
Operation for dacryocystitis ...	1		
7. Operations on the ear :—			
Trephining of mastoid cells ...	1		
8. Operations on the head and face :—			
Removal of nasal polypi ..	1		
Extraction of teeth ...	4		
9. Operations of chest :—			
Paracentesis of pleural cavity.	5	1	Died of tuberculosis.
Thoracotomy for empyæma :—			
(a) with excision of rib ...	1	1	
(b) without excision of rib ...	1		
10. Operations on abdominal cavity :—			
Paracentesis for ascites ..	27		
Radical cure of hernia ...	1		
Kelotomy for strangulated hernia ...	2	1	Admitted with gangrene of intestines & peritonitis.
Operation for suppurative appendicitis ...	3	1	
Operation for liver abscess	12	2	
Operation for sulphrenic abscess ...	1		
Carried over ...	147	10	

		Cases.	Deaths	Remarks.
	Brought forward ...	147	10	
11.	<i>Operations on rectum and anus :—</i>			
	Fistula in Ano ...	9		
	Dilatation of anus for fissure ...	1		
	Dilatation of rectum for stricture ...	1		
	Operation for piles by cautery ...	3		
12.	<i>Operations on urinary organs :—</i>			
	Urinary fistulæ ...	6	1	Died of chronic cystitis.
	Urethrotomy (external) ...	1		
	Dilatation and catheterisation for urethral stricture ...	11		
13.	<i>Operations on Male Generative organs :—</i>			
	Circumcision ...	17		
	Tapping for hydrocele :—			
	(a) with injection ...	1		
	(b) without injection ...	17		
	Tapping of hæmatocele ...	3		
14.	<i>Operations on Female generative organs.—</i>			
	Curetting of uterine cavities ...	1		
	Operation for pelvic cellulitis (suppurative) ...	1		
15.	<i>Operations on arteries :—</i>			
	Ligation of radial artery.	1		
16.	<i>Operations on Lymphatic glands :—</i>			
	Excision of femoro inguinal glands ...	3	1	
17.	<i>Operations on skin and subcutaneous tissue.</i>			
	Excision of carbuncle ...	2		
	Scraping of phagedænic ulcers ...	5		
	Removal of in-grown toenail ...	1		
	Operations for cancrumoris ...	2	1	
	Excision of corns ...	1		
	Incision of furuncle ...	1		
	Incision of whitlow ...	1		
18.	<i>Evacuation of Abscesses :—</i>			
	Head and Face ...	17		
	Neck ...	10		
	Chest ...	7	1	Case of multiple abscesses attended by anaemia and debility,
	Carried over ...	270	14	

	Cases	Deaths	Remarks.
Brought forward ...	270	14	
18. <i>Evacuation of Abscesses</i> — (Continued) :			
Abdominal wall ...	2		
Back ...	1		
Lumbar ...	4		
Upper extremities ...	50		
Lower extremities ...	70		
Generative organs ...	21		
Iliac ...	7		
Perineal and ischio-rectal.	23	1	Case complicated by gangrene of scrotum and penis.
Sacral ...	3		
Periarticular ...	2		
Glandular ...	32	1	Died of valvular disease of the heart.
Other regions ...	2		
Diffuse cellulitis ...	29	1	Case of diffuse cellulitis of thigh.
Incision and scraping of sinuses ...	8		
Retropharyngeal abscess...	1		
19. <i>Removal of Foreign Bodies</i> :—			
(a) Extraction of bullets ...	3		
(b) Extraction of a piece of iron from eye-ball	1		
(c) Extraction of a piece of stick from abdominal cavity ...	1		
20. Suturing of wounds ...	2		
Total ...	532	17	

(A). *Amputation of the thigh* was performed in six cases, viz :—

- (a) 2 for acute suppurative arthritis of the knee, of traumatic origin, attended by septicæmia. Both patients died.
- (b) 2 for extensive osteo-myelitis of the leg. One of the patients died of asthma, the other recovered.
- (c) 2 for chronic tubercular arthritis. Both recovered.

(B.) *Abscess of the Liver* —There were 12 operations for abscess of the liver as against 11 in 1904 and 48 in 1905.

Only two of the patients died. This result was far better than last year when only 3 out of the 8 cases operated upon, recovered.

23. *Laboratory Works.*

The hospital laboratory under the able management of Mr. Maya continues to do excellent work, not only for the institution itself but also for the other Government hospitals, the military department and private practitioners.

The following is a summary of the researches carried on during the year.

A.—BACTERIOLOGICAL.

	Specimens examined.	Nature of researches.	Civil Hospital.	Medical & Health Department.	Military Department.	Private Practitioners.	Total.
1	Blood	Plague bacillus	7	...	...	...	7
	Sputum	"	3	...	...	...	3
	Smear preparations from buboes	"	6	...	...	...	6
	" " " spleen	"	9	...	...	...	9
	" " " lungs	"	8	...	...	...	8
	(after death)						
2	Blood from suspected typhoid fever	Widal's test	13	7	8	34	62
3	Blood	Malarial parasites					
	"	a. Benign tertian	53	...	...	2	55
	"	b. Double	17	...	...	...	17
	"	c. Quartan	3	...	...	...	3
	"	d. Double	1	...	...	...	1
	"	e. Malignant tertian	21	...	...	...	21
	"	f. Mixed	3	...	...	...	3
4	Blood (bullock)	Surra trypanosoma	...	...	...	2	2
	" (horse)	"	...	...	...	1	1
	" (dogs)	"	...	...	...	2	2
5	" (mules)	Piroplasma equi	...	14	...	...	14
	" (horse)	"	...	1	...	...	1
6	Exsudate from tropical phagedænic ulcers	Pathogenic bacillus	4	...	...	...	4
7	False membranes and swab-bings from throat	Diphtheria bacillus	3	1	...	4	8
8	Fluid from ovarian fluid	Pathological cells	...	...	...	1	1
9	Pus	Pyo: organisms	7	...	...	...	7
10	Pleuretic fluid	Tubercle bacillus	1	1	...	...	2
	Pus	"	1	...	...	...	1
	Sputum	"	111	4	2	18	135
	Peritoneal liquid	"	...	1	...	...	1
11	Smear preparations from spleen and lungs of rabbits	Rabbit's septicæmia	4	...	...	...	4
12	Stools	Ankylostoma and other intestinal parasites	...	...	...	1	1
13	Urethral discharge	Gonococcus	3	...	...	7	10
14	Urinary sediment	Ova of bilharzia	11	2	...	4	17
15	" "	Filaria embryos	2	...	...	...	2
16	Water analyses, qualitative and quantitative	Pathogenic and non-pathogenic germs	...	2	...	...	2
17	Blood from spleen and liver (after death)	Leishman Donovan's bodies	2	...	...	...	2
18	Preparations of vaccine lymph	Pyogenic organisms	...	7	...	...	7

EXPERIMENTAL.

19	Blood of bovidæ	Experimental inoculation on rabbits to test presence of trypanosoma	...	2	...	...	2
20	Pathological fluid	Experimental inoculation on Guinea pigs to test presence of tubercle bacilli	...	2	...	...	2
21	Vaccine lymph	Experimental inoculation on rabbits, to test inocuity	...	2	...	...	2
"	" "	Experimental vaccination on rabbits to test activity	...	19	...	...	19

B.—NON-BACTERIOLOGICAL.

1	Microscopical examination of sections of pathological tissues	.....	6	6	1	2	15
2	Enumeration of blood corpuscles	.....	...	1	...	...	1
3	Enumeration of white corpuscles	.....	...	1	...	...	1
4	Quantitative analyses of urine and microscopical examination	.....	17	...	...	86	103
5	Radiographs	...	8	...	2	6	16

DEPARTMENTAL.

In consequence of the increased morbidity shown this year, the wards were frequently overcrowded and the energy of the whole staff was severely taxed. Never before had the deficiencies of this hospital and the inadequacy of the present organisation been more apparent. I think it therefore seasonable to point out once more the causes of the existing imperfections and hope that Government will soon find its way towards putting the establishment on a better footing than presently obtains.

1o. The professional staff is insufficient. The bulk of the hospital work falls on the Assistant Medical Superintendent and myself, for, the Police and Prison Surgeon attends only to police cases and from the nature of his duties can give but limited assistance. The consequence is that my assistant and myself are overworked and have little or no time left for minute clinical observations and for pathological and bacteriological investigations. Valuable opportunities are thus lost which, if turned to account, would be the means of elucidating many obscure points in the aetiology of our tropical diseases. The appointment of an additional medical attendant with right to private practice is, I submit, necessary under such circumstances.

2o. The nursing staff is insufficient and is underpaid. The scanty salaries allotted to the posts of warders do not afford sufficient inducement to young men possessed of a certain amount of education to choose the nursing profession. My experience of the class of warders we have had up to now is that they do not fully appreciate the importance of their work, and the extent of their responsibilities. Very few discharge their duties with zeal and thorough conscientiousness while fewer still understand discipline and succeed in enforcing it amongst the servants and patients under their charge. These defects, apart from the insufficient stimulus in the way of pay, I attribute to the want of proper authority on the part of such warders, and to the fact that many have no calling for the nursing profession and only take it up as a "pis-aller". This is a question which I have repeatedly treated in previous papers and the more I acquire experience in hospital matters, the more I consider it my duty to insist on the necessity of providing for a more liberal distribution of pay to this hard-worked class of Government servants.

3o. The Estimates for the financial year 1905-06 provide for the appointment of a lay nurse on the staff of the Civil Hospital, but the newly created post has not yet been filled up.

4o. The diet-scale should in my opinion be modified, and I recommend that this question be as soon as possible laid before a competent committee. According to the system hitherto in use, patients have to keep a long fast, viz: from 5 in the afternoon to 10 on the following morning. To obviate this inconvenience, we are forced in serious cases, to prescribe eggs, chocolate or beeftea for early morning. The constitution of the different diets should be revised, so as to meet the wants of the patients better than it does at present.

5o. The constant irregularities on the part of the contractor for milk and the one for fowls and eggs in the delivery of their supplies, have been a source of great annoyance, loss of time, and interference with the comforts of the patients. These contractors in the course of the year, frequently failed to supply in full or in part, the articles applied for. In consequence of such failures, the patients had, in many cases, to do without part of their food or to take a delayed meal consisting of less

nourishing or less palatable substitutes. This sad state of things has been a constant cause of complaint and I regret that efficient means have not yet been found of bringing the contractors to a better observance of their obligations.

6o. In conclusion, I must allude to the difficulties connected with the provisional arrangements intended to adapt the Royal College buildings as much as possible to the purposes of a hospital. So long as the question of the transfer of the Royal College had not been settled, we had, for the last seven years, to rest contented with these arrangements, unsatisfactory as they are, and to manage the best we could. Now that this matter has received a definite solution, I earnestly hope that Government will soon study the expediency of providing this, the largest hospital of the Island, with a permanent organisation, based on modern requirements. As things now stand, the temporary kitchen is a disgrace to the establishment. The operation room does not answer its purpose from insufficient lighting, &c.

The buildings assigned to the female department are altogether inadequate and are constantly overcrowded. There is no proper lying-in ward and patients in actual confinement have to be kept in the same room as those that have been confined and those who are awaiting confinement.

There is no available accommodation for gynaecological examinations and dressings and we have been forced to screen off for that purpose part of the gallery at the top of the stairs.

These are very serious defects in a hospital and I need hardly say that the sooner they are remedied the better.

F. A. ROUGET,

Medical Superintendent, Civil Hospital.

19th. February, 1906.

ANNEXURE VI.

Lunatic Asylum.

Annual Report for 1905.

1.—GENERAL STATISTICS.

The number of insane patients remaining in the Lunatic Asylum on 31st. December 1904 was as follows :—

	Europeans.	Creoles.	Indians.	Chinese.	Total.
Males ...	7	106*	138	7	258
Females ...	...	105	51	...	156
Total ...	7	211	189	7	414

* Including 1 patient under observation subsequently found to be sane.

2. *Patients remaining in the Asylum on 31st. December 1905 :—*

	Europeans.	Creoles.	Indians.	Chinese.	Total.
Males ...	2	116	119	7	244
Females ...	...	105	62	...	167
Total ...	2	221	181	7	411*

* Exclusive of 1 Chinaman escaped and not yet recaptured.

3. The daily average number of patients during 1905 was as follows :—

Males ...	...	244.49
Females ...	...	159.06
Total ...		403.55

Showing a total decrease of 3.56 over the daily average in 1904. There was however an "increase" of 4.5 and a decrease of 8.06 in that of the female and male patients respectively.

The greatest number confined at any one time in 1905 was 414 (258 males and 156 females).

There were 16 males and 2 female criminal lunatics in the Institution, forming a percentage of 4.47 of the daily average.

4. The daily average of harmless imbeciles at the Barkly Asylum Lunatic Branch Wards was as follows :—

Males ...	...	67
Females ...	...	28
Total ...		95

5. General Return of Mental diseases, Admissions and Deaths in 1905 at the Lunatic Asylum.

	Remaining at end of 1904.	Yearly Total.		Total cases treated.	Remaining at end of 1905.
		Admissions.	Deaths.		
Idiocy ...	9	7	2	16	10
Mania ...	207	78	18	285	209*
Melancholia ...	25	19	1	44	32
Dementia ...	121	5	6	126	117
Delusional insanity...	51	1	9	2	43
Total ...	413	110	36	523	411
Admitted on interim order but found sane by Commissioners in Lunacy.					
	1	6	...	7	...
Total ...	414	116	36	530	411

* Exclusive of the Chinaman (Ah Wen) absconded and not yet recaptured.

6. Admissions in 1905 :—

Males ...	...	75
Females ...	...	41
Total ...		116

Showing a decrease of 3 on the admissions of 1904.

86 (54 males and 32 females) were first admissions.

8 (6 males and 2 females) were second admissions and included 1 male patient received from the Barkly Asylum Lunatic Branch Wards.

22 (14 males and 8 females) were re-admissions from probation.

7. The Districts and places from which these patients were admitted were the following :—

Port Louis ...	...	30
Plaines Wilheims ...		36
Flacq ...	...	13
Grand Port ...	...	11
Savanne ...	...	7
Moka ...	...	7
Black River ...	...	5
Rivière du Rempart ...		2
Pamplemousses...	...	2
Seychelles ...	...	2
Rodrigues ...	...	1
Total...	...	116

8. The mental diseases of 40 of the admissions were attributed to the following causes :—

Epilepsy	...	...	13
Gunjah Smoking	...	...	7
Drink	...	...	7
Grief	...	...	6
Fever	...	...	3
Hysteria	...	...	2
Heredity	...	...	2
			—
Total	...		40

In the remaining 76 cases no obvious cause could be assigned, but poverty and frequent attacks of malarial fever may have been the principal causal factors.

9. There were 83 discharges or 4 more than in 1904—

	Europeans.	Creoles.	Indians.	Chinese.	Total.
Males	...	1	21	43	66
Females	12	5	17
Total	...	1	33	48	83

10. These discharges may be classified as follows :—

	Cured.	Relieved.	Not improved.	Total.
	Finally discharged.	Discharged on probation to the care of relatives or friends.	Transferred to the Barkly Asylum, Lunatic Branch Wards.	
Males	...	13*	46	66
Females	15	2
Total	...	13	61	9
				83

* Including 7 males found by the Commissioners to be sane at the time of their examination.

11. In addition to these discharges from the Lunatic Asylum, 4 patients were discharged on probation to the care of relatives from those already transferred to the Barkly Asylum Lunatic Branch Wards.

12. The total number of insane persons in the Colony on 31st December 1905 may be tabulated as follows :—

	At the Lunatic Asylum.	At the Barkly Asylum, Lunatic Branch wards.	Out, on Probation.	Total.
Males ...	244	71	40	355
Females ...	167	29	12	208
Total... .	411	100	52	563

If we include the escaped Chinaman, the total number may be considered as 564.

The population of the island on 1.1.06, as obtained from the Registrar General, being 377532, the proportion of total insane to population was 1.49 per 1000 or 1 in 669, as compared with 1 in 655 in 1904.

13. The percentage of recoveries (cured and relieved) to admissions was 63.79 as compared with 52.9 in 1904.

The percentage of the same to Daily Average Strength was 18.3.

51 (33 male and 18 female) patients out of the 128 probationers (viz : 63 remaining on 31.12.04 + 61 discharged from the Lunatic Asylum in 1905 + 4 discharged from the Barkly Asylum, Lunatic Branch Wards) were finally discharged as cured during the year as compared with 23 in 1904.

There having been 64 final discharges in 1905 (13 from the Lunatic Asylum and 51 from the probationers) the percentage of complete recoveries to the total treated and on probation in the Colony (578 on 31.12.04 + 116 admissions) was 9.2

14. The deaths in the Institution were 36 (32 males and 4 females) in 1905, or 13 more than in 1904.

The death rate to daily average was 8.9 o/o or an increase of 2.24 o/o over that of 1904.

15. The patients who died belonged to the following classes of the population viz :—

	Europeans.	Creoles.	Indians.	Chinese.	Total.
Males. ...	4	6	13	...	23
Females ...	...	8	5	...	13
Total ...	4	14	18	...	36

16. These deaths occurred at the following ages :—

Age.	Number of patients.
10—20	...
20—30	...
30—40	...
40—50	...
50—60	...
60—70	...
70—80	...
80—90	...
	2
	7
	6
	6
	4
	4
	5
	2
	36

17. Causes of death :—

Senile decay	...	...	7
Debility	...	...	3
Epilepsy	...	...	4
Diarrhoea	...	...	4
Dysentery	...	...	3
Malarial fever (Intermittent)	...	...	3
,, fever (Remittent)	...	...	1
Influenza	...	...	2
Tuberculosis	...	...	2
Pneumonia	...	...	1
Pericarditis	...	...	1
Cerebral haemorrhage	...	...	1
Cerebral congestion	...	...	2
Chronic ulceration of large intestines	...	...	1
Asphyxia from suicidal hanging	...	...	1
		Total	36

The higher mortality in 1905 was due chiefly to epilepsy, cerebral congestion and haemorrhage, diarrhoea, dysentery and intermittent fever.

18. 12 deaths (7 males and 5 females) occurred from among patients confined in the cells.

15 of the patients who died had been more than 15 years in the Asylum, 4 more than 24 years, and one 34 years.

On the other hand 8 patients had been admitted in a very delicate state of health and died within 18 months of their admissions. One of this category was 91 years old.

5 (3 male and 2 female) patients were reported to have died in 1905 from the harmless imbeciles at the Barkly Asylum Lunatic Branch Wards.

2 male and 1 female patients died from among those discharged on probation.

II.—*Prevalence of sickness in the different seasons of the year and general character of disease prevailing.*

19. The total admissions into the two Infirmaries of the Lunatic Asylum were 473 against 429 in 1904 (2 of the patients died outside the Infirmaries and are not included.)

20. The daily average of sick in the Infirmaries as compared with that of the last four years was as follows :—

	1901	1902	1903	1904	1905
Male Infirmary	15.92	13.29	13.82	10.81	16.10
Female Infirmary.	19.32	14.75	8.99	14.76	11.72
Total ...	35.24	28.04	22.81	25.57	27.82

There has been a general increase in the daily average of sick when compared with that of the last two years, due chiefly to the high rate of sickness in the Male Infirmary.

21. Percentage of daily average of sick to daily average strength :—

1901	1902	1903	1904	1905
—	—	—	—	—

This again shows a gradual increase in the sick rate during the last 3 years, but not so high as in 1901 and 1902.

The case mortality for total cases treated was also higher in 1905, being 7.1 % as against 5.08 % in 1904.

22. Table of monthly admissions into the two infirmaries, total stay and average stay per patient :—

Months.	Male Infirmary.	Female Infirmary.	Total.
January ...	22	16	38
February ...	23	18	41
March ...	39	24	63
April ...	30	6	36
May ...	28	14	42
June ...	18	10	28
July ...	27	14	41
August ...	29	16	45
September ...	17	10	27
October ...	18	11	29
November ...	27	11	38
December ...	26	19	45
Total ...	304	169	473
Total stay ...	6,039	5,477	11,516
Average stay per patient.	19.8	32.4	24.37

23. Monthly admissions for malarial fever, dysentery, diarrhoea, tuberculosis, lung affections and ulcers in both Infirmarys :—

Diseases.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Malarial fever...	... 15	14	28	13	18	8	10	15	5	12	13	11	162
Dysentery ...	... 3	1	3	1	1	...	1	1	...	2	2	2	15
Diarrhoea ...	... 4	6	2	7	3	...	5	5	2	2	4	4	44
Tuberculosis ...	... .	...	1	...	...	...	...	...	1	1	...	...	3
Lung affections :—	... 5	3	4	2	4	1	5	7	5	1	1	3	41
Asthma	... 2	1	2	1	2	...	1	...	1	...	2	12	
vz: { Influenza	... 3	2	1	1	2	1	4	7	4	...	1	1	27
{ Pneumonia	... .	...	...	...	...	...	...	...	1	...	...	1	
{ Hæmoptysis	... .	...	1	...	...	...	...	...	...	...	...	1	
Ulcers ...	... .	1	1	...	...	...	...	...	...	2	2	6	

24. From these tables it will appear that the greatest number of admissions was in the first quarter of the year.

Admissions into the Infirmarys in each quarter in 1905 :—

1st. Quarter	...	...	142
2nd. ,"	...	...	106
3rd. ,"	...	...	113
4th. ,"	...	...	112
		Total...	473

If we divide the year into summer (November to April) and winter (May to October) we find, as in 1904, that the greatest number (261) of admissions was in the former as compared with the latter season, (212).

25. As usual the admissions for malarial fever headed the list ; the greatest number occurring in the first four or five months of the year, and the least in September.

There was an increase of 56 in the admissions for malarial fever over those of 1904, with a greater number of deaths.

The case mortality also increased from 1.8 o/o to 2.4 o/o in 1905, showing a more virulent type.

The prevalent type was as usual the quotidian, 156 admissions, with 3 deaths.

There were also 4 admissions for tertian, 1 for quartan and 1 for remittent fever. The last named case died.

26. As would have been expected there was also an increase in the admissions for dysentery which rose from 7 in 1904 to 15 in 1905. The greater number occurred as in the case of malarial fever, during the first four or five months of the year. 3 died.

27. Diarrhoea was also more or less prevalent during the year. Exactly the same number of cases was admitted as in 1904 viz: 44. 4 deaths were due to this cause in patients already affected with debility.

28. We lost 3 patients from tuberculosis of the lungs ; exactly the same number as in 1903 and 1904.

29. We had a reduction in the total number of admissions from lung affections. Influenza was however prevalent in a mild form throughout the year, with an increase in the months of July, August and September. 4, 7 and 4 admissions were registered for those months against 27 for the whole year. 2 of these patients died from lung complications.

30. We had 6 admissions for ulcers of legs, but none of them were of the phagedænic type observed in 1904, the epidemic of which appears to have died out in the Colony.

31. The principal admissions for other diseases were as follows :—

Epilepsy	...	...	...	32
Cellulitis	...	...	...	30
Debility (chiefly senile)	...	...	...	21
Eczema	...	...	...	16
Rheumatism	..	...	...	9
Ecthyma	...	...	...	6
Congestion and haemorrhage of brain			...	4
Anæmia	...	...	...	3
Lymphangitis	...	...	...	6

Slight wounds from falls or blows from other patients in cells 37

We lost four of the cases of epilepsy from cerebral complications supervening during the fits. three out of the four insane patients affected with congestion and haemorrhage on the brain died.

The only effectual treatment which my experience in the Asylum has shown to be of some use in these cases is the immediate and continuous application of ice to the head, combined with drastic purgatives and counter irritants to neck and calves.

III.—*Meteorological conditions of the seasons and their probable effect with regard to sickness.*

32. The mean temperature of the summer taken in the Asylum was 80° F, as compared with 77° F in 1904. That of the cooler months 70 against 71 in the previous year.

The summer season was therefore on the whole hotter in 1905 and the winter cooler. The greater heat of summer may no doubt have caused the increased prevalence of malarial fever, dysentery and diarrhoea which were observed.

As I stated in my last annual report it is desirable that a more extended and complete set of observations be made in the Asylum in order to appreciate the influence of the meteorological conditions of the seasons and their correlation with the diseases prevalent in the local Government Institutions.

With this object in view a good barometer has been ordered for the Institution and other useful meteorological instruments will be supplied at an early date.

IV.—*Other observations concerning the Institution.*

33. The sanitary works which were commenced in 1904 for the extension of the underground drainage of the Institution with a view to conducting the refuse water of the bath rooms and washings from the latrines, and collecting the same into covered tanks and utilising them for watering purposes in the gardens at the back of the Asylum, were resumed in 1905 and actively carried on.

The whole of the male department and part of the female compound have thus been satisfactorily drained.

34. Several important measures for the improvement of the Asylum are unfortunately still in abeyance. In view of the increased prevalence of malarial fever in 1905 and its probable extension in 1906 owing to the continued excessive heat of this summer, it is hoped that the measures I have already reported upon for the exclusion of mosquitoes from the Infirmarys will be soon carried out.

The walls of the Institution which were originally made too low in some places and constructed with half dressed stones presenting internal projections, have in spite of every care on the part of the attendants, facilitated the escape of a few of the lunatics during the year (7 escaped over the walls). All of them except a Chinaman have been retaken.

One unfortunate case was that of an Indian patient affected with a sudden fit of depression, who thus escaped and hanged himself from a tree in the back gardens.

Measures for raising and smoothing internally these walls have been taken and will soon be carried out.

35. It is gratifying to report that the entertainment of lunatics as part of their treatment, which I have always advocated, has been approved by Government and that a grant for the purchase of a splendid cinematograph has been made.

Two entertainments with this instrument took place in 1905 and caused great satisfaction to the patients.

A first rate gramophone has also been purchased. The patients were on another occasion given a treat of cakes and lemonade, and some amateur players specially entertained them.

In addition to this the female patients were frequently entertained by lady visitors who take a special interest in the Asylum and who play and make them dance in the female Day Room, where a piano has been provided.

36. The patients who are able to work are occupied as much as possible.

The daily average employed in 1905 was as follows :—

	Gardening.	Trade.	Household work.
Male ...	24.05	22.13	41.25
Female ...	...	...	Washing... 14.95 Wards ... 18.75 Sewing ... 9.28

The savings realised by Government by the work of the lunatics and their attendants in the Institution amounted in 1905 to the substantial sum of Rs. 5,258.64 (Vide Annexure A appended.)

37. The average cost of the diets as worked out by the Steward and Accountant, based on the average prices in 1905 supplied by the Storekeeper Generals' Department was as follows :—

1. First class sick. per patient.

(Chiefly for Europeans and better class of patients) Rs. 0.46,747 Cents.

2. First class normal.

(Also for Europeans and better class of patients ...) Rs. 0.63,6362 Cents

3. Second class sick.

(For Natives) R. 0.48,4833 Cents

4. Second class normal.

(For Natives) R. 0.27,498 Cents.

45. I append a copy of these diets giving the prices of each article (Vide annexures B and C).

J. I. PADDLE,
Medical Superintendent,
Lunatic Asylum.

21st March 1906.

ANNEXURE A.

STATEMENT OF WORKS &c. DONE BY THE ATTENDANTS AND PATIENTS
OF THE GOVERNMENT LUNATIC ASYLUM DURING THE YEAR 1905.

Description of work	Quantity.	Contract price or Estimated Value.	Amount.		Total.	
			Rs.	C.	Rs.	C.
<i>Gardens.</i>						
Green brèdes	kilos 6151.680	Rs. 0.07 per kil.	430	61		
Potherbs.	1337.700	12 ,,	160	52	591	13
<i>Masonry.</i>						
Dry walls	200 feet	Estimated	66	67		
Repairs to drains, basins &c.		do	60	...	126	67
<i>* Tinware.</i>						
New utensils		Estimated	211	68		
Repairs		do	85	...	296	68
<i>Carpentry.</i>						
Repairs to tables armoires &c.		Estimated	15	...		
<i>Bedding and Clothing.</i>						
Making of new mattresses	127	Rs. 0.50c. each	63	50		
” ” ” pillows	57	.25 ,,	14	25		
Repairs & remaking old mattresses	908	.50 ,,	454	...		
” ” ” pillows	1129	.25 ,,	282	25		
Repairs to strong dresses	1430	.10 ,,	143	...		
” to clothing	21000 pieces	Rs. 0.05c. each	1050	...	2007	00
<i>Sundries.</i>						
Straw hats	201	.25 each	50	25		
* Washing	169.746 pieces	Rs. 1.60 o/o	2171	91	2222	16
* After deducting cost of materials			Total	Rs	5,258	64

ANNEXURE B.

FIRST CLASS SICK 1905

Articles of Diet.	Amount of Diet.	Quantity per 100 Diets.	Price per kil.	Value of 100 Diets	
				Rs.	c.
Beef	Kil. 0.225	Kil. 22.500	Rs 1.20	27	00
Bread	.340	34.	.19.50	6	63
Milk	Litre 1.	Litres 100.	.11.	11	00
Sugar	Kil. 0.045	Kil. 4.500	.18.60		83.70
Tea	.008	800	1.60	1	28
				Total	46 74.70

FIRST CLASS NORMAL.

Beef	Kil 0.225	Kil. 22.500	Rs 1.20	27	00
Bread	.450	45.	.19.50	8	77.50
Butter	.030	3.	1.50	4	50
Fresh fish	.225	22.500	.51.33	11	54.92
Milk	0.25 centil.	Lit. 25,	.11.	2	75
Potherbs	Kil. 0.110 gram.	Kil. 11.000	.12.	1	32
Potatoes	.225	22.500	.25.	5	62.50
Sugar	.045	4.500	.18.60		83.70
Tea	.008	.800	1.60	1	28
				63	63.62

ANNEXURE C.

SECOND CLASS SICK 1905.

Articles of Diet.	Amount of Diet.	Quantity per 100 Diets.	Price per kilo.	Value of 100 Diets.	
				Rs.	c.
Beef	Kil 0.225 grams	Kil. 22.500	Rs 1.20	27	00
Bread	.340	34.	.19.50	6	63
Milk	Lit. 1.	Lit. 100.	.11.	11	00
Rice	Kil. 0.225	Kil. 22.500	.12.38	2	78.55
Sugar	.023	2,300	.16.60		42.78
Tea	.004	.400	1.60		64
				48	48.33

SECOND CLASS NORMAL.

Articles of Diet.	Amount of Diet.	Quantity per 100 Diets.	Price per kilo.	Value of 100 Diets				Remarks.	
				Milk Days		Fish Days			
				Rs.	c.	Rs.	c.		
Bread	Kil 0.225 grams	Kil. 22.500	Rs 0,19.50	4	38.75	4	38.75	Milk days 3 times a week.	
Butter	.010	1.	1.50	1	50	1	50		
Fresh fish	.225	22.000	.51.33	...	...	11	54.92	Fish Days, 4 times a week.
Milk	75 & 13 Centil :	75&13 Litres	.1h.	8	25	1	43		
Dholl	Kil 0.060	Kil. 6.000	.10.74	...	...	...	64.44	
Salt fish	.060	6.000	.36.79	...	...	...	22.07	
Potherbs	.110	11.	.12.	...	...	1	32	
Rice	.450	45.	.12.38	5	57,10	5	57.10	Average cost per patient Rs. 0.27.49	
Sugar	.023	2.300	.18.60	...	42.78	...	42.78		
Tea	.004	.400	1.60	...	64	...	64		
Potatoes	.225	22.500	.25	5	62.50	...	...
Green Brèdes	.120	12.	.07	...	84	...	...
Total				27	24.13	27	69.06		

ANNEXURE VII.

Annual Report

On the work performed by the Government Analyst in 1905.

The analyses and reports had reference as usual to medico-legal investigations undertaken for the Judicial Department, and to work required by the Medical and Health Department, the Municipality and other Departments.

2. Sixty-eight Medico-legal investigations, involving the separate analysis or examination of 272 different articles or pieces of conviction, were undertaken for the Judicial Department, and 54 analyses or reports, referring to 104 articles, were required by the other Departments.

The total number of investigations amounted to 122 and the articles examined or reported upon came up to 381, showing an increase of 69 on the work done in 1904. As pointed out in my last annual report the work performed in the Laboratory of the Government Analyst has progressively increased since 1902.

That of 1905 was the highest on record both in the number of investigations and of articles examined.

3. The Laboratory has during the year been enriched with a certain number of new books of chemistry and useful apparatus, including an excellent refractometer. A few more instruments have been ordered and when they arrive will prove invaluable to the Laboratory and greatly facilitate the work undertaken therein.

4. In presence, however, of the increased demand on the time of the Government Analyst, I trust that the assistance he has applied for in the way of a skilled servant being permanently

attached to the Laboratory, will soon be forthcoming, otherwise the delays complained of in the return of the results of his analyse will be unavoidable.

Analyses performed for the Judicial Department.

5. The 68 medico-legal investigations were required by Magistrates of the following Districts :

		Number of investigations.	Number of articles examined.
Port Louis	...	18	62
Plaines Wilhems	...	16	73
Savanne	...	12	51
Grand Port	...	7	28
Pamplemousses	...	4	8
Moka	...	4	37
Black River	...	3	6
Flacq	...	2	5
Rivière du Rempart	...	1	1
Seychelles	...	1	1
Total	...	68	272

6. They were required in connection with the following cases:

		Number of cases.	Number of articles examined.
Murder or alleged murder	...	7	44
Attempt at murder	...	6	39
Wounds and blows	...	2	19
Larceny with violence	...	3	10
Rape, attempt at rape or indecent assault	...	15	86
Sodomy	...	4	8
Bestiality	...	2	4
Poisoning or alleged poisoning	...	17	44
Administering noxious substance	...	4	5
Alleged adulteration	...	3	4
Illicit distillation	...	4	6
Larceny of wire	...	1	3
Total	...	68	272

7. Distinct evidence of poison was found in six of the cases of poisoning. In the rest of the alleged cases nothing definite was found on analysis. These investigations were conducted, as usual, in suspicious cases of short illness or of sudden death, where no sufficient pathological evidence to account for the same had been discovered after autopsy by the Government Medical Officers.

8. The poisons found in the six above mentioned cases were the following :

Strychnine,
Cyanide of potassium,
Arsenic, antimony and carbolic acid,
Corrosive sublimate,
Opium (solid),
Laudanum.

In four of these cases the poison had been taken for suicidal purposes.

9. The substances containing arsenic, antimony and carbolic acid had been sent up for analysis in a case in which a tinsmith was prosecuted for having caused the death of a donkey by external applications of an ointment containing these poisons in a concentrated form. Acting as a quack veterinary he had pretended that he could cure the affection called "Cordon" with his ointment, and he had been called in by the owner of the donkey for this purpose.

The result was a gangrenous ulceration of the leg and death of the animal.

10. As these poisons had evidently been procured from some pharmacy, this case points to the necessity of a more strict application of the Pharmacy Laws for the supply of poisonous substances and to the advisability of allowing none but regular Veterinary Surgeons to treat animals in this colony.

11. In three out of the four cases of alleged administering a noxious substance, crushed bottle glass was found mixed up with rice. In one case as much as a table spoonful of the crushed glass had been added.

The culprits were Indians among whom this special method of doing grievous bodily harm to their neighbour for petty motives of revenge appears to be on the increase.

12. In the fourth case an uncommon noxious substance was used. The down consisting of the brownish stiff hairs found on the outer surface of the large sheathing leaves of the trunk of the bamboo plant had been scraped off and thrown into the water to be drunk by a person. As these hairs under the microscope have the appearance of very sharp pointed needles and cause a good deal of irritation when touched by the hand there is no doubt that serious intestinal trouble would have resulted if the intended victim had drunk the water.

13. The greatest number of pieces of conviction examined were as usual in cases of murder and rape.

Blood stains were found in most of the articles examined.

In the cases of rape, spermatazoa were only found in two cases.

Analyses performed for Medical and Health and other Departments.

14. These analyses and reports were distributed as follows :—

Departments.	Number of Analyses	Number of Samples.
Medical and Health Department...	19	29
Sanitary Warden and Assistant Sanitary Warden ...	5	6
Prison Department ...	1	1
Barkly Aylum ...	10	15
Receiver General's Department ...	5	22
H. M. Customs... ...	3	17
Municipality	11	14
Total... ...	54	104

15. The analyses and reports had reference to the following articles :

Articles.	Number of Analyses.	Number of Samples.
Milk	17	20
Water	3	12
Wine	2	2
Rum	1	1
Vinegar	1	1
Alimentary substances :—		
(Sardines, lard, mustard, flour, arrowroot)	8	11
Drugs :—		
(Chloroform, corrosive sublimate, lactose)	3	3
Substance for denaturating alcohol.	2	10
Varnish	1	1
Urine	...	...
(Quantitative analysis of sugar &c.)	4	6
Pathological specimens :—		
(blood, pus plague bacilli, parasites)	5	7
Cigarette paper	1	15
Cancelled bank notes	1	10
Reports on electrolysis, izal &c.	4	4
Examination of lactometer	1	1
Total...	54	104

16. Milk analyses headed the list. They were reported upon as follows :.

Samples.	Adulteration.
5 ...	... 10 o/o of water & skimmed.
1 ...	... 20 o/o " "
1 ...	... 31 o/o " "
1 ...	... 42 o/o " "
1 ...	... 43 o/o " "
6 ...	... Skimmed
5 ...	... Not adulterated.

In presence of the high percentage of adulteration in some of the samples above enumerated and the practice of skimming so often adopted by milk sellers, it is very important as I have already had occasion to point out in my last two or three annual reports, that a definite standard of purity be insisted upon for the sale of milk in this colony.

I have recommended a minimum of 8.5 o/o for non fatty solids, which has been adopted by the Society of Public Analysts and the Board of Agriculture of England and which my experience as Government Analyst has shown to have seldom been exceeded in genuine milk I have analysed.

In the case of the fat I have recommended a lower standard of 2.5 o/o as a fair minimum, taking into account the poor breeds of cows kept in the island.

Being given the difficulty of securing convictions in cases of

prosecution for skimming, I submit that it is highly advisable that the proof of genuineness be left with the defence, as is done in England. This will be seen in the two following articles of the Sale of Milk Regulations 1901 of the Board of Agriculture which may well be adopted as a model on which to frame the regulations I have proposed.

1. When a sample of milk (not being milk sold as skimmed, or separated, or condensed milk, contains less than 3 per cent. of milk fat it shall be presumed for the purposes of the Sale of Food and Drugs Acts, 1875 to 1889, *until the contrary is proved*, that the milk is not genuine by reason of the abstraction therefrom of milk fat, or the addition thereto of water.

2. When a sample of milk (not being milk sold as skimmed or separated or condensed milk) contains less than 8.5 per cent. of milk-solids other than milk fat, it shall be presumed for the purposes of the Sale of Food and Drugs Acts, 1875 to 1889, *until the contrary is proved*, that the milk is not genuine, by reason of the abstraction therefrom of milk-solids other than milk fat or the addition thereto of water.

17. Three reports were sent in on analyses of water. One of them had reference to the Mare aux Vacoas supply. This water, as is well known, is obtained from the high ground beyond Vacoa and Curepipe and chiefly consists of the rain water collected in a natural basin forming an old forest lake. After undergoing some purification and filtration, it is distributed through cast iron pipes to Curepipe, the lower part of Plaines Wilhems and even to Port Louis.

The water from this source, owing to its isolated situation, presents one great advantage over that obtained from rivers and wells, in its being entirely free from pathogenic germs and animal *dejecta*, which more or less contaminate all those supplies in consequence of their being situated near centres of habitation and their acting as natural drains to those localities.

Being given this unique advantage no expense should therefore be spared to maintain the isolation of the high ground in the vicinity of the collecting basin and of the water works, and to render the water as pure as possible.

That obtained from the springs and rivulets around the Mare was found to be clear and fresh, while after passing over the peaty deposits in the collecting basin it had acquired a brownish tinge and an unpleasant fishy taste and smell, which was only partly removed by treatment with iron scraps in Anderson's purifier. My analysis unfortunately showed that in spite of filtration the water still contained a large proportion of the organic matter in suspension as well as in solution and that, especially during the dry season, it became charged, after leaving the filters, with sulphuretted hydrogen, which I attributed to the presence of microscopic algae of the class of *beggiatoa alba*, which developed chiefly in the filter beds on the organic matter strained off therein, and also on the sulphates contained in the madreporic coral sand of the filters.

I recommended the substitution of river sand or of crushed stone for the coral sand in the filters, the greater aeration of the water by an increased number of aerating trays and the removal of organic deposits from the Mare by methodical dredging and cleaning thereof. These measures have been endorsed by the expert in London to whom my report has been submitted for consideration and will, I have no doubt, in due course be carried out.

18. Eleven samples of alimentary substances were analysed or examined. They consisted of lard, mustard, flour, arrow-root and sardines.

Some of the samples of lard sold by Chinamen were found to be rancid and discoloured by dust and other impurities and to have been adulterated with beef stearin and cotton seed oil.

Two of the samples were adulterated with starch.

The mustard analysed, sold under the appellation of "Mustard Condiment" was found to consist of starch, Cayenne peppers, turmeric and a small proportion of powdered mustard seed.

As this so called mustard may be used by the public for sinapisms in cases needing their application it is advisable that one should be cautioned against doing so, as its rubifacient properties are almost nil.

19. I had again to analyse several samples of cigarette paper for the Customs Department. A large amount of paper similar in appearance to that sold in books or packets for smoking purposes had been imported by a trader under the designation of "Cerf volant" paper. The analyses showed that the paper in question had a great resemblance with cigarette paper of the brands "Job" and "Nil" and that owing to its low percentage of ash it could be well suited for smoking purposes.

20. An interesting investigation in connection with the Receiver General's Department was submitted to me by the Chairman of a Special Committee appointed for the purpose of ascertaining whether the red ink marks on cancelled bank notes could be removed by some chemical process.

After trying various methods I found a process by which this could be done without much difficulty. It consists in washing the defaced notes in successive baths of hot water to which a few drops of ammonia have been added. They are then washed in plain water and ultimately dipped in a bath of dilute oxalic acid which removes the last vestiges of the red ink stains.

In view of the possibility of the abstraction of such cancelled notes and their treatment by some similar process I submitted that the only effectual method of cancelling them which could not be tampered with would be to cut off a strip from each note containing either both signatures or both numbers and immediately destroying such strips.

21. Lastly among other reports I was requested to report on the advisability of adjusting the excise and import duties on spirits. In view of the facility with which Gay Lussac's centesimal alcoholometer could be read, its greater scientific accuracy and also for the purpose of simplifying the standard of measurement, I recommended as a preliminary measure its adoption in the place of those of Cartier and Sike now used at the Rum Warehouse and Customs Department respectively.

In view, however, of the practical difficulties which the alteration of the minimum charge involved in each Department I recommended that the matter be submitted to a Special Committee for consideration.

J. I. PADDLE,

4th. April 1904.

Government Analyst.

